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FROM

Pres. C. W. Eliot

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NATIONAL SERVICE

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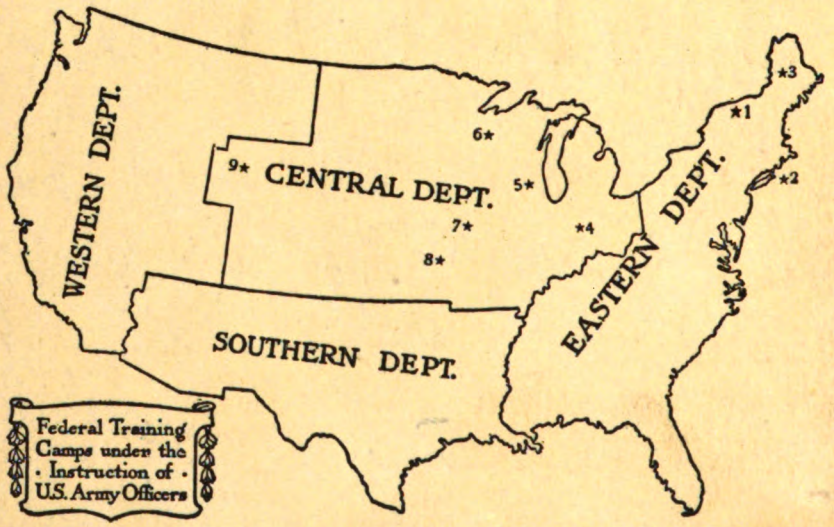

SENIOR CAMPS FOR 1917

EASTERN DEPARTMENT

1. Plattsburg, N. Y.—Four camps, June 2nd to July 1st, July 7th to August 5th, August 11th to September 9th, September 15th to October 14th.

CENTRAL DEPARTMENT

5. Fort Sheridan, Ill.—Three camps, July, August and September.
6. Fort Snelling, Minn.—Two camps, July and August.
8. Fort Riley, Kansas—Two camps, August and September.

These camps are open to all citizens 18-45 years old and by special permission 45-55
Additional camps as numbers warrant
Southern and Western Departments not yet definitely announced

JUNIOR CAMPS FOR 1917

For boys from 15th to 18th birthdays

EASTERN DEPARTMENT

2. Fort Terry, Plum Island, N. Y.—Two camps, June 30th to July 29th, August 2nd to August 30th.
3. Portland, Maine—Two camps, June 30th to July 29th, August 2nd to August 30th.

CENTRAL DEPARTMENT

4. Ft. Benjamin Harrison, Ind.
7. Ft. Des Moines, Iowa.
9. Ft. D. A. Russell, Wyoming.

Other locations and dates will be announced later.

For information apply to

MILITARY TRAINING CAMPS ASSOCIATION
OF THE UNITED STATES

EASTERN DEPARTMENT: 31 Nassau Street, New York

WESTERN DEPARTMENT
First National Bank
San Francisco, Cal.

SOUTHERN DEPARTMENT
Fort Sam Houston
Texas

CENTRAL DEPARTMENT
502 Federal Bldg.
Chicago, Ill.

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NATIONAL SERVICE

February, 1917

EDITORIALS

NATIONAL SERVICE

WITH the first issue of this journal, it is appropriate that we should tell something of its scope and purposes.

NATIONAL SERVICE represents the belief of the younger generation that a revival of readiness to sacrifice personal interests in some degree to the common welfare is desirable and necessary for the security and best development of American institutions.

Such a spirit may take many forms, but the obvious and immediately essential direction in which it is needed is in the equal assumption by the youth of the Nation of the burden of military duty, in order to provide the necessary safeguards upon which all national development ultimately depends.

NATIONAL SERVICE has had its origin in the widespread and growing interest of civilians in military affairs. The technical journals of the services, excellent as they are, inevitably reach only a limited constituency and cannot entirely supply the need for correct military information, which is felt by a steadily increasing body of citizens.

The necessity of the hour is for the dissemination of accurate information among the citizens of the United States, and the formulation of sound policies founded on knowledge and intelligent consideration. A permanent and workable system of defense must rest upon the informed opinion of the people, expressing itself, slowly perhaps but surely, through their representatives. No permanent plan will be put into effect until a majority of the people, understanding the issues and forming a deliberate judgment, decide once for all that the day of the mercenary and volunteer army is past. Such a judgment cannot be made hastily, because the mass of the people have no knowledge or experience on which to form their opinion.

It is safe to say that even now there is among the people of the United States less intelligent comprehension of military affairs—what an army is, what military training means, and what precise means and methods must be followed to maintain an adequate defense of our institutions and liberties—than among the people of any other great country, except China. This is inevitably so in view of our military organization and policy since the Civil War. Since then we have depended for land defense on a com-

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paratively insignificant number of professional soldiers and small volunteer state forces. These forces combined have never equaled, even in the Spanish War, more than one half of one per cent. of the population, and, at the present strength of about 250,000, including regulars and militia, represent one quarter of one per cent. of the population and hardly more than one man in a hundred of military age. It is indeed small wonder that military life and training are unfamiliar subjects, concerning which the conceptions of the average citizen are of the vaguest.

Yet the American people are quick to mark and learn, and the events of the Great War have brought a stirring and inspiration throughout the Nation. Men to whom military drill, rifle, and pack were wholly remote have found themselves abandoning family and business and flocking to voluntary camps, even at their own expense. Others have joined the organized volunteer forces. This movement, which has been one of the most significant in American life, rests on no temporary influence or excitement. Its roots run deep. The volunteers of the militia and the training camps are but the vanguard of a new generation realizing the ancient truth that eternal vigilance is the price of liberty. Vaguely at first but with increasing definiteness has come the realization that a system which depends upon the few to perform the duty of all is not consistent with our democracy, that equal obligation and equal service must go hand in hand with equal rights if the ideals and substance of the Republic are to endure.

Out of this spirit of the younger generation NATIONAL SERVICE has been born. As its name implies, its hopes and aims are bound up with the cause of equal obligation for the defense of the country, equal service in performing that duty, and universal training to fulfil it.

We shall seek to contribute in some degree to the practical accomplishment of this end, by presenting, without heat, partizanship, or bias, the facts as to the state of our own military organization and the systems of other nations. We shall hope for the support and active coöperation of all those who believe in the fundamental importance of a system of military service under equal obligation and who believe with Washington that "a free people ought not only to be armed but disciplined."

THE NECESSITY FOR A DEFINITE PLAN

THE problem of universal training and service has reached a stage where it is necessary to define a plan. A large proportion, perhaps a majority, of the people have reached the conclusion that a radical change is needed. They are fully able to perceive that a system which imposes military duties for the benefit of all on the small fraction of citizens sufficiently patriotic to undertake the burden is wrong in principle. They are also coming to see that as a matter of business common sense the present régime is preposterous. With Federal appropriations for land defense of more than $250,000,000 in the next fiscal year there is a disposition to inquire what result this vast expenditure produces, and when it is found that all the country gets is slightly over 100,000 trained professional soldiers and somewhat less than 150,000 partially trained volunteer citizen troops it is generally appreciated that we are not getting our money's worth. But with all the dissatisfaction with the present organization comes an insis-

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tent demand for definition of a substitute plan.

Exactly what is meant by obligatory training and service? How long would the training last, what would be its character, how are officers to be chosen and obtained, how would the plan apply in time of war, should the system be under Federal or State control or joint control, what would be the function of the professional army? While there are many other minor questions, these are the main issues and they require as definite answers as possible.

NATIONAL SERVICE will urge a system of intensive instruction in the field as opposed to extensive training in barracks or armories for all the young men of the Nation who are physically qualified. This training should be received at the age of 19 or 20, before the young men assume the duties of family life and become economic units in the life of the Nation, and should be given in the minimum of time. We believe that the value and effectiveness of intensive training in the field, as distinguished from indoor training and perfunctory drills, has not yet been appreciated in this country, and we believe that a system can be devised under which six months' intensive training in the open will be sufficient to produce adequately trained citizen troops. We shall oppose any plan that seeks to impose upon the youth of the country any greater term of training than is necessary to fit them reasonably for service in the National Army.

There must be not only mandatory training but mandatory service. To say that every able-bodied youth shall fit himself to defend his country, but that in time of need it shall be left to the willing and patriotic to assume the burden, is fundamentally opposed to the entire philosophy of equal obligation. It is for the Nation to determine when and how each shall serve, whether in the field or in the factory. Assuming that training is given annually to all physically qualified boys in their nineteenth or twentieth year, NATIONAL SERVICE will advocate legislation under which—in time of war or threatened war—the classes would be called out for service beginning with the youngest.

The future army of the people will be democratic. In a Republic such as ours it is essential that every citizen shall have an opportunity to become an officer and that the officers shall be selected for reasons of merit alone. While the recent legislation providing for the training of reserve officers in the colleges of the country is unquestionably necessary to supply a pressing temporary need, we are not in sympathy with such a system as a permanent measure. It is neither right nor wise that a system should be perpetuated under which a large proportion of the officers are selected from the comparatively small percentage of our people who are able to attend colleges. All should enter the ranks and rise to authority on their proved capacity, so that the son of the millionaire and the son of the mechanic will have equal opportunity to demonstrate their capabilities for leadership. Such a system would be a cornerstone for the democratic American army. It would furnish an effective guarantee against a military caste and all the evils inherent in such a class.

Any system of general training must be based upon the fundamental principle that the forces of the Nation shall be responsive to the sole and exclusive control of the Nation. Unless this essential condition is recognized, true military efficiency can never be attained. The curse of our militia system has been the division of con-

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trol between the Nation and the states. There must be one central administration of the Army just as there is one administration of the Navy; that control can never be successfully shared.

To instruct and train the citizen army and to man our foreign garrisons will be the function of the Regular Army. A professional army for other purposes will be neither advisable nor necessary. We must always maintain a permanent corps of commissioned and non-commissioned officers for purposes of instruction, precisely as such a corps is maintained in Switzerland. A professional army as a main reliance for a fighting force is inconsistent with and unnecessary to a system under which the duty of defense will be assumed in practice as well as in theory by all able-bodied young men.

What this journal means by universal training and service is, therefore, a plan with these elements: intensive, continuous training out of doors for a period of not over 6 months; the training to apply to all physically fit young men at 19 or 20; equal obligation to serve in time of war as well as to train in time of peace; the control and administration of the citizen army exclusively by the Federal Government; selection of officers under a plan of promotion on merit with equal opportunity for all, and the maintenance of a professional army primarily for instruction purposes.

GREAT BRITAIN AND THE GREAT WAR

FOR the United States the lesson of England in the Great War is of the most importance, in view of the similarity between her military condition before the war and our own at the present time.

There has been a good deal of loose assertion that the lack of British preparation for land warfare on a great scale was due to an entire failure to forecast such a war. This version, however, is not borne out by the facts. On the contrary, for ten years prior to the Great War its coming was foreseen by British statesmen and soldiers. The international alignment was clearly foreseen, it was understood that Belgium might be the initial theatre of war, and British military opinion was so definitely formed that, two years before the war began, an English officer published a review article accurately predicting the scenes of military operations that culminated in the Battle of the Marne.

During this period it was recognized that preparation for this great struggle was the most important mission of the British Government. The British Navy was increased and its organization perfected, the antique organization of the British war office was reformed, a modern general staff was established, and many other excellent measures were adopted. But public opinion was deaf to the plea of Lord Roberts that the only real solution of the problem lay in the formation of a national army based on the principle of universal military obligation and universal military training. He pointed out that Great Britain should be able to contribute an army of two or three million men to the allied cause upon the outbreak of hostilities. This she might have done and this she did not do.

As a matter of fact the British military establishment at the outbreak of the Great War was quite like that so elaborately contrived for us at the last session of Congress. It consisted of a small professional regular army known as the Expeditionary Force and a force of citizenry known as the Territorial Force—a little better trained and a little better organized than our Na-

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tional Guard but not considered fit for war until after six months of additional intensive training.

The fatal day arrived in August, 1914, and Great Britain was unprepared. Her negotiable military power was so small that Germany was able completely to ignore her capacity to defend the neutrality of Belgium. Instead of coming to the relief of France with an organized force of two million men she was forced to sacrifice practically all of her trained soldiers in the desperate retreat of her little expeditionary force. With a navy assuring her the strategic control of the sea she had no military forces with which she could realize upon this her single advantage in the military situation. She had plenty of men that might become soldiers by 1916 or 1917 but she had neglected to provide the army needed for victory in 1914.

It is not improbable that the future historian of the Great War will find its real cause in the unpreparedness of Great Britain to meet a situation that was clearly anticipated. At all events her incapacity to meet her military obligations to her allies in land warfare has obviously been the principal cause of a prolonged and hitherto indecisive war, and a closer analysis of the events leading up to the Great War must establish the conviction that had Great Britain been prepared as France and Russia were prepared there probably would have been no war at all. Germany entered the war upon the calculation of victory and the controlling factor of that calculation was her estimate of Great Britain's military incapacity.

THE SOFT PEDAL REMOVED

MAJOR GENERAL HUGH L. SCOTT, the Chief of Staff of the Army, has done a great public service in pointing out in his annual report that no sound system of national defense can be erected upon the principle of voluntary military service. This means that the period of official vacillation and insincerity is at an end and that the problem of national preparedness can be discussed upon its merits and finally advanced to a sound solution upon the only scientific basis of universal obligation to military service. It may be that the final solution of the problem still lies far in the future, but we have taken a most important step toward that solution when, thanks to General Scott, we have emerged from the cloud of hypocrisy and cant that has hitherto enveloped this question.

The most remarkable thing about the situation is that it should be considered remarkable at all. The Chief of Staff of the Army, the legally designated military adviser of the President and the Secretary of War, has astonished the country by telling the truth in regard to our national military problem. Instead of being regarded as a matter of course, this simple manifestation of official veracity is hailed as an epoch-making phenomenon.

In the discussion of most public projects there is an alignment of opinion into two parties, one comprising the adherents and the other comprising the opponents. In the discussion of universal military service, however, there has hitherto been a more numerous third party composed of those who really endorse it but who for various reasons are unable or unwilling to avow their convictions. In our polls of our friends and acquaintances we find that there is scarcely any one who frankly and definitely denies the principle that a nation at war is entitled to the full man-power of the nation, and that this can be realized only through training all its able-bodied young men.

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We find that there are many who frankly and definitely affirm this principle. But we find that there is a large proportion who, while convinced in their own minds, find it necessary or expedient to be silent, if called upon to speak aloud.

The advocates of a sound system of national defense must hail it as a good omen when the Chief of Staff of the Army is permitted at last to state the facts that underlie our military problem. There has hitherto been a majority that has retarded the cause of universal military training, but it has been a silent majority of timid friends, and not an open-voiced majority of avowed opponents.

While we cannot agree with General Scott that, with intensive methods, twelve months' training is essential for the citizen army, his matured views are, of course, entitled to great weight.

NATIONAL GUARD INFLUENCE

THE most powerful influence in the country for universal-training legislation is represented by the men who have themselves had some measure of military training. The evidence accumulates that the members of the National Guard, after their experience on the border, abundantly appreciate the injustice and impossibility of imposing the burden of a general duty upon one per cent. of the men of military age. Their opinion is emphatically shared by the members, now about twenty thousand in number, of the Federal training camps. The Federal training camp movement is not and never has been a movement to establish another volunteer force. The object of the Training Camps Association, as recently expressed by its National Committee, is to bring about a system of universal training and equal service for the youth of the United States. Many of the training camp men have served in the National Guard, and it augurs well for the future that these two bodies of men are in complete accord on the subject. Both now realize as never before the unfairness and absolute impracticability of a continuance of the volunteer system.

It is to be hoped that the National Guard may find some way to make their collective opinion effectively heard, and to impress their views upon those responsible for Federal military legislation. It would be difficult indeed to disregard the united views of the men of the National Guard who have obeyed the impulse to sacrifice something of their personal interest for the security of the Nation and have thereby been subjected to great individual hardship.

MILITARY INFORMATION

IT WILL be one of the main purposes of NATIONAL SERVICE to supply its readers with facts in convenient form concerning our military situation, such facts as either do not now reach the general public at all or trickle through in such small doses and such diluted form as to be of small value.

Much of this information is to be found in the hearings before the military committees of Congress and in the reports of the various divisions of the War Department. In no other country are the details of military organization and equipment laid bare with such entire completeness and frankness. It has been truly said that foreign governments need look no further than the printed hearings before our Congressional committees for a complete revelation as to our forces and their equipment. The wisdom of this policy may perhaps be doubted;

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but, since it is so, we should at least draw from it the advantage of having our own people informed as to where we stand. Yet how many citizens are in any degree familiar with the detailed information contained in the hearings before the Senate Military Committee in 1916, although in that document is to be found a remarkably full exposition of our military position and resources? Or how many have read or even heard of the analysis of our military problems contained in the War College document, "A Proper Military Policy for the United States," submitted to the Secretary of War in September, 1915?

To meet this obvious need for accurate information we shall publish, from time to time, extracts and summaries of the most vital official reports and hearings.

In March we shall present an analysis of the actual status of the National Guard based on the annual report of the Federal Bureau of Militia Affairs and the valuable report of Mayor Mitchel's Committee on National Defense. In this issue will be found an analysis of the annual report of the Adjutant General, which throws a strong light on the pressing problem of recruitment in the Regular Army, and extracts from the last report of the Chief of Staff.

A FORUM FOR DISCUSSION

NATIONAL SERVICE aims to be, in the true sense, a forum for the discussion of all questions relating to military organization and policy. Since the outbreak of the European War a great and significant change has occurred in the country with regard to interest in military affairs. It is not too much to say that more civilian thought has been concentrated upon the subject in the last two and a half years than in as many decades prior to that time. Thousands of citizens have felt the necessity of studying these questions, and a body of opinion has grown up representing enlightened thought and study. We shall hope that all this will be reflected in the columns of NATIONAL SERVICE. With that end in view we shall maintain a Contributors' Column and shall heartily welcome contributions from our readers on topics relating to military organization and policy. We shall be open to conviction and be receptive to all points of view, irrespective of how radically they may differ from our own.

THE article by Captain G. A. Lynch, U. S. A., printed in this number, is the first of a series of military articles by distinguished experts, dealing with various phases of the phenomenal development of military science in the Great War. Articles to follow will include: "How Modern Field Artillery Supports Modern Infantry," by Major Ernest D. Scott, U. S. A.; "The Air Service in War," by Brigadier General George O. Squier, U. S. A.; "The Influence of Mechanical Transport in Modern War," by Major Palmer E. Pierce, U. S. A.; "How Modern Defensive Positions Are Constructed; Attacked, and Defended," by Lieutenant Colonel Henry Jervey, U. S. A.; "Development of Heavy Type of Movable Sea-Coast Gun for Transportation by Rail," by Major Stanley D. Embick, U. S. A.; "The Defensive Problem of the United States as Modified by the Great War," by Major John McA. Palmer, U. S. A.

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UNIVERSAL SERVICE *and* WORLD PEACE

By CHARLES W. ELIOT
(*President Emeritus of Harvard University*)

THE United States has become an industrial and commercial World Power which needs to have all foreign markets open to it, and therefore needs to have all the seas and oceans of the world open for its foreign trade in times of peace—open for both its imports and its exports of foods, drinks, dyes, drugs, raw materials, and manufactured articles—and open, too, in time of war so far as it is possible for a dominant force to keep them open.

For a hundred years the British Navy has practically secured for American trade free intercourse with all nations in peaceful times; but the present war has demonstrated that Great Britain alone can no longer make the oceans safe for the commerce of the manufacturing nations. If the United States expects to share the benefits of the resistance the Entente Allies are making to the domination of Germany and her allies, it follows that the United States should take its fair part in securing the freedom of the seas in times of peace, and in delivering from the fear of war the nations to which foreign commerce is indispensable.

When the present war ends, durable peace can be maintained only by a dominant military and naval force provided by a limited alliance of strong nations. This force would have to be both naval and military; and the United States ought to be in position to contribute to the alliance its due proportion of moral and physical force. No federation of the world, United States of Europe, parliament of the world, world court, or force of public opinion will answer the purpose of securing a durable peace; because there will probably continue to exist in Europe great naval and military forces in the hands of governments that have believed, and apparently still believe, that might makes right, and that military necessity absolves them from all obligation to keep their pledges. So long as such governments exist capable of making immense preparations for war in secret, so long must a few strong nations maintain predominant military and naval forces ready to act together on the instant.

Since the United States has this strong reason for maintaining a large modern navy always ready for service, and for keeping on call millions of young men so trained and equipped for the work of a soldier that they could be put promptly into the field, it ought to claim universal naval or military service from all its young men, and prepare them adequately for that service without detaching them from their industries and their homes any more than is necessary to produce a sure result. The democratic Swiss people have shown the way to do this in a thoroughly effective manner. A professional army like the present Regular Army of the United States will not answer the new purposes of the coun-

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try. It is too small, its present schedules cannot be filled by voluntary enlistment, and it is not a democratic army. The state militia is non-existent in many states, and in none provides a body of men adequately trained and equipped for modern warfare.

It is one of the admirable demonstrations given by the present war that a democratic army, trained in a comparatively brief period, will endure successfully all the hardships of a soldier's life, and fight as hard and long as any imperial or autocratic army now fights, or has ever fought.

Much new legislation must be passed by Congress and the state legislatures before universal military service can be effected. It is much to be wished that this new legislation should be forthwith studied in both the national and the state legislatures. Many plans to secure the object in view have already been put before the public; but there is at present no agreed-upon plan, and all the plans proposed depart too much from the safe model—that of democratic, frugal, and experienced Switzerland.

In fulfilling its international obligations, the country will lose that small portion of the working time of its young men which must be temporarily withdrawn from its industries; but it will gain an assured capacity to defend its territory and its ideals, and with that conscious capacity would go an increased self-respect. Its young men would sacrifice for brief periods some of their accustomed liberties; but on the other hand they would gain something worth having in the way of coöperative discipline, self-reliance, and self-control. If every able-bodied young man were thoroughly trained for service in the national army or navy at some serious sacrifice on his part, and then held himself constantly in readiness to fight for his country if it were in peril, the Nation as a whole would soon be inspired by new sentiments of patriotism and duty, and of self-sacrificing devotion in defense of home, kindred, and friends, of public justice and liberty, and of progressive hope for the generations to come.

In view of the fact that Germany has lately professed a willingness to place herself at the head of a league to enforce peace, and to take part in securing to all nations, large and small, their independence and their natural development, it seems desirable that the American people should appreciate the impossibility of arriving at any durable peace for Europe, and hence for the rest of the world, until the central military empires change their form of government from the autocratic military form to the constitutional form, under which a representative assembly has power to change the ministers of the Crown, and to forbid secret preparations for war, and the declaration of war without its consent. There are to-day no visible signs of such fundamental changes in the governments of those empires; so that no present action can be based on expectation of such serious internal changes. Hence the present necessity of securing peace by international naval and military forces.

It is impossible to imagine how the exhausted resources of Europe can be restored and the destructions of the war repaired without provision for a reduction of the enormous armaments with which all Europe is burdened. Yet it is plain that no prompt reduction of armaments can possibly be procured until the nations see constituted and ready an international force capable of keeping the peace. Among the belligerent nations of Europe there is not one to-day that would think of relying for its own security on any parliament of the world, inter-

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national tribunal, or mere force of public opinion. These things are today pleasing, imaginary goals for a distant future, just as they have been already for hundreds of years. Such public liberties as already exist in the world have been obtained by forcible resistance to oppression; and they must be maintained for generations to come in the same way. It is for the freer nations of the world, including the United States, to maintain them by force until they can be safely maintained without force.

The RED WHITE, *and* BLUE CAMPS

By NEWTON D. BAKER

(*Secretary of War*)

A DOZEN well-located and permanent camps, taking the place of five or six sporadic, imperfectly situated training places; an expected attendance of 40,000 men as compared with about 20,000 last year and 2,600 in 1915; a Federal appropriation of $2,000,000 for the expense of the camps and the consequent relief of the individuals from nearly all the financial sacrifice hitherto involved in securing summer training; the formulation of a progressive and uniform course of study, practical and theoretical for the various camps—these are among the considerations that occur to me when I am asked to describe the progress of the citizens' training camps for elementary instruction in military practice.

The institutions that seem now about to develop into permanent, adequately financed organizations had their beginning in two training camps for college students in the summer of 1913. The experiment proved sufficiently popular and profitable to warrant its repetition in 1914; the following year, 1915, witnessed not only the continuation of the students' camps but the inauguration of similarly conducted business men's camps at Plattsburg, N. Y., Fort Sheridan, Ill., Monterey, Cal., and Tacoma, Wash. The attendance at last year's camps increased 600 per cent. over 1915, and Army officers are confident that the number in the camps of next summer will nearly double that of 1916.

Until now, these encampments have been the result of a rather unorganized but widespread feeling among the citizens of the country that more effective measures should be taken, looking to the national defense, and that all citizens so desiring could secure expert instruction in the elementary principles of military practice.

The benefits of this training to those receiving it have been enumerated often, but repetition may serve to emphasize them:

(1) Primarily, the purpose of the camps is to offer to those citizens who intend to serve in defense of the country in time of war an opportunity to secure some measure of the training necessary to make their services of value on the firing line.

(2) Incidental but important is the

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physical benefit—particularly for those whose occupation keeps them indoors and comparatively inactive for considerable periods—gained from marches, camping, instruction in sanitation, etc.

(3) Business men have testified, after the training period, to the commercial, disciplinary value of insistence on punctuality, organization, authority, etc.

(4) From the beginning there has been a gratifying spirit of small-d'd democracy in the work of the camps. Social, financial, geographical, political distinctions are swept aside for what is the common concern of all of us—the preparation for the defense, as a last resort the forcible defense, of these United States.

Splendid as has been the past of the training camps, their future is more promising; their to-morrows are more important than their yesterdays.

Hereafter, in place of the students' instruction camps, we shall have camps for the "Reserve Officers' Training Corps"; in place of the business men's camps, we shall have "Citizens' Training Camps." The number, location, and time of holding camps will be left to the discretion of the various department commanders, to be determined by the responses received from the different localities in their departments and also, unfortunately, by the limited number of officers and troops of the Regular Army available for duty at the camps. The situation on the Mexican border may thus limit the number of camps that can be held next summer, for it will not be wise to hold a camp unless enough officers are available for the instructing staff.

It has been and will continue to be the policy of the War Department to entrust the organization and conduct of these camps to department commanders, but to insure equal and uniform instruction at all camps the general regulations and scheme of instruction will be published by the War Department. Considerable study has already been given to these regulations and department commanders have submitted their views as to the form the regulations and courses of instruction should take. The regulations will be issued in the form of a pamphlet and the courses of instruction, together with other useful information relative to the conduct of camps held heretofore, will be included in appendices.

The conduct of the camps will not be changed radically but the instruction will be made progressive. The complete course of instruction for any citizen will consist of three camps known as the Red, White, and Blue camps. The first camp for each man will consist entirely of infantry instruction. Should he then desire and seem qualified to continue with the infantry instruction, his next training will be in the White Camp, infantry, and his third training period, in the Blue Camp, infantry. But should he show a preference for cavalry, field artillery, engineers, or signal corps, and appear qualified for one of these arms, he will take three camps in the arm selected, in addition to the Red Infantry Camp already completed.

The management of the camps will be somewhat more difficult, now that the Government is to furnish transportation, subsistence, and uniforms. As the law now stands, it seems to be necessary to furnish transportation and uniforms "in kind." From the point of view of officers who have most experience at the camps, it would be much more convenient and desirable, both from the citizen's and the Government's points of view, to permit each man to buy his own transportation and uniform and to reimburse him for their authorized cost at the end of

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the camp. There is a feeling that unless this is done, it may result in bringing to the camps a great many men who would come merely for an outing at Government expense and with no serious purpose in view. It would be much better for the citizen to pay his own way, with the understanding that when he has satisfactorily completed his four weeks of training the Government will reimburse him the cost of his railroad ticket to and from the camp and part of the cost of his uniform. Some changes in the wording of the law seem advisable, and I have no doubt that Congress will agree to any reasonable alterations desired.

If the legislative branch of the Government keeps the armed force of the country upon a volunteer basis, the turning out yearly of 30,000 to 50,000 men instructed in the fundamentals of the military profession will mean no insignificant contribution to the potential soldiery of the Nation; more than that, it will constitute a sort of personification of the patriotism, the responsibility, the self-sacrifice, which all of us may well help to spread abroad in the land. These men, returning 'prepared' to the peaceful pursuits of their various vocations, represent one of the forces that we must depend upon to give virility to our republic.

The PLATTSBURG IDEA

Universal Military Service

By MAJOR GENERAL LEONARD WOOD, U. S. A.

THE Plattsburg Idea is expressed by the words—"Preparation for National Service." Primarily, service in war, because training for such service is generally wanting in this country. Incidentally, the training is training for life, for with the spirit of service for the Nation in time of war goes the spirit of service for the Nation and the community in time of peace. The Plattsburg spirit voices the principle of individual obligation for national service and an appreciation of the fact that with equality of opportunity and privilege goes equality of obligation to the limit of our physical and mental capacity.

It is the spirit of patriotism: it voices Universal Military Service. At first it was a voice crying in the wilderness. Now, it is becoming a voice which is heard in the highways and byways of the Nation. It is not only a call to service, an appeal to every man's sense of duty, but it is also a voice of warning: an attempt to awaken a slumbering people to a sense of present unpreparedness and inability to meet its soldier responsibility as citizens of a democracy, a democracy whose main army in time of real stress and trouble—in case of war with a strong nation—must be the people, trained to reasonable efficiency in the use of arms in order that they may be able to defend their country effectively in time of need.

It carries an appeal to the women of

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the Nation: to take such action in the way of organization and preparedness as will be the strongest insurance against war and in so doing to see to it that an opportunity is given their sons, their husbands, and brothers to secure such training as will enable them effectively to discharge their military obligation if called upon; training which will insure their having a sporting chance when they are called upon to meet in battle the trained men of the great nations of to-day.

It appeals to the good sense of our women to remember that while we are striving for world peace, and are all in agreement that war is horrible and regrettable, nevertheless it may be necessary and unavoidable in the discharge of our duty and in the defense of the right. It appeals to them not to permit conditions to continue which will certainly result in their men being sent into the struggle against their better prepared antagonists, willing, but almost useless, sacrifices.

There is a strong force behind the Plattsburg Idea—a force which springs from the knowledge of the condition of the Nation as to preparedness and an intelligent appreciation of the state of thorough organization for offense or defense existing throughout the world to-day among all who may possibly be our rivals in some great field of endeavor where the interests at stake may be so vital that the determining argument will be force.

The spirit of Plattsburg is not one which stimulates a fondness for war or tends to depreciate the value of arbitration, but it is one which recognizes that, horrible as war is, it is sometimes unavoidable and that, desirable as arbitration is, it is often unattainable. Its teachings are based upon the lessons of time and experience and its warning is exemplified by the fate of those who have traveled the road we are now traveling—the road of money seeking and fortune building accompanied by neglect of that organization and preparedness so necessary to protect the things which must be protected if we are to survive as a nation. It strives to impress upon the people that the sinews of war are not numbers and wealth alone; on the contrary, that the real sinews of war are the bodies and spirits of men, trained, and disciplined, and backed by the spirit of sacrifice and an appreciation of citizenship obligation in war as well as in peace.

If the Plattsburg appeal meets with a response and if the warning is heeded, we shall have a real national awakening accompanied by an organization of national resources. If the Plattsburg spirit becomes the spirit of this nation, the result will be national solidarity to an extent never before dreamt of in this land of ours. It will mean a better nation physically and morally and a more efficient nation from the economic standpoint. It will bring again to this people an appreciation of the fact that in the support of great policies and principles, vital to humanity, it is sometimes necessary to break the peace to keep the faith, and a realization of the fact that it availeth not for a nation to gain the whole world if it lose its own soul.

A general acceptance of the Plattsburg Idea means the building up of a spirit of real Americanism, a spirit which will be strong to make America what she must be if she is going to endure—a real melting pot, in which the various, and often discordant, elements which are now swarming to our shores will be fused into one common mass of Americanism. It means a nation animated and actuated by a strong national spirit.

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This will be accomplished without any lowering of ideals. On the contrary, it will result in a loftier spirit, sounder ideals, a truer morality, and a greater willingness to do our duty even if it cost blood and treasure. We shall have a national spirit actuated by higher purpose and firmer resolve, replacing sentimentality marked by unwholesome characteristics—characteristics which foreshadow the decadence of a people.

The Plattsburg Idea demands Universal Service for all who are physically fit, realizing that not only our own safety but our power to protect others will be found only through this means. Equality of opportunity and obligation is the foundation on which democracy rests. The highest type of national character cannot exist save through the acceptance of this vital principle. A nation progresses through its own efforts and struggles and not through the protection of others. Harsh and cruel as it is, the law which still governs the world and its peoples is that of the Survival of the Most Fit, and the Most Fit are those who are prepared to meet not only the economic and social problems of the day, but also to protect their rights and institutions with arms if necessary. There is nothing in the spirit of true Christianity which identifies it with peace at any price. On the contrary, Christianity enjoins the organization of the strength of right against the forces of evil. It does not suggest that we leave our land and our coast unprotected, or that we should not defend our homes and institutions against an invader. The Christian religion enjoins deeds, not words. The Christian religion stands for righteousness and truth at any cost, and so long as men have honest convictions, so long as they live under institutions which they believe to be vital to humanity, they will fight for them. When our people are no longer willing to support their honest convictions with their lives, the life of the Nation will be finished and one of the more fit and better peoples will take our place.

We have trusted our safety to militia and volunteers. We have drifted on through a century. We have squandered the lives of our people with a freedom suggestive of brutal disregard for human life and complete lack of an appreciation of the need of intelligent preparation for defense. As yet, we have not met single-handed in war a strong, well organized nation. We can hope to meet such an issue successfully only through the adoption of Universal Service, through the training of our people to discharge their obligation in war. We must teach the value of organization of the type which characterizes most of the great nations of the world to-day: an organization which makes available the entire strength of the people either for the commercial struggle or military effort.

We must remember that if we wish to amplify the application of arbitration we must be strong enough to make our voice heard, for it is the strong nation which decides whether questions are to be settled by arbitration or by war, and not the weak nation.

We must realize that our country can be organized and ready and yet be just and tolerant. She can be prepared for defense and still be free from the spirit of aggression. The Plattsburg Idea is the embodiment of these principles.

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MUDDLING THROUGH

The Lesson of England

By SYDNEY BROOKS

NEXT to the victory of the Allies an Englishman can wish nothing better for America than that she may profit by British experience in this war. "For God's sake, don't let yourselves be caught as we were caught," is the burden of the message of friendly entreaty and of sharp warning that Great Britain to-day bears to the United States. And never at any moment in the twenty years that I have known America was the message more needed than now. With the events of the past two and a half years knocking incessantly against the cells of his brain, it is with consternation, it is almost with horror, that an Englishman to-day revisits the United States and finds himself faced with conditions of unpreparedness far more chaotic than any he can recall in his own country. "Has America," he is inclined to ask, "learned nothing from the war? Has the lesson of our blundering and confusion and of the hideous risks that a long refusal to face realities compelled us to run—has this lesson been wholly thrown away? With so tremendous an example before their eyes, will Americans still persist in their failure to realize that there is no political problem of any kind that is for one moment comparable with the problem of national security?"

The inquiring visitor may pose these questions but he receives from his American friends no very reassuring answers. Some of them will even protest to him that the United States is less ready for war to-day than it was three years ago and that in spite of all the talk about preparedness in Congress and the press there has been an actual retrocession and not an advance. It is no part of my purpose to inquire whether this be really so. But the more he looks into present-day conditions in the United States, the more painfully is it impressed upon an Englishman that if the state of British preparedness in August, 1914, could be represented by the figure 100, that of American preparedness at this moment would stand no higher in the scale than somewhere between 20 and 30. There may, in other words, be points at which the United States is nearly one third as ready for war as we were two and a half years ago, but in most particulars she emerges from any thorough comparison only about one fifth as ready. For it must not be forgotten that the British Navy, which was our main line of defense, was, when the war broke out, as completely and as instantly adequate to its task as the German Army. Nor must it be forgotten that our Expeditionary Force was also immediately available, organized down to the last button, and in many ways probably as perfect an instrument of war as has ever been fashioned. The trouble with us was not that we prepared badly, but that we did not prepare enough, that defense had failed to keep pace with policy, that we had never accurately measured our liabilities, and that the

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greatest of all wars found us with a military equipment admirably fitted to cope with trouble on the Indian frontier or to carry out comparatively small punitive expeditions, but utterly disproportionate to the task, which none the less it was forced to assume, of sustaining a part in a European struggle not of armies but of nations.

American unpreparedness, so far as my observation goes, is on an even more comprehensive scale than was our own. To the defect of insufficiency it adds the further defect of inefficiency. Not only is it ludicrously and lamentably inadequate for a war with even the weakest of the first-class Powers but, as we have recently seen along the Mexican border, it breaks down beneath the simplest of military tests. I see no sign that any considerable item in either the naval or the military apparatus of America even begins to approach the degree of efficiency in which the outbreak of the war discovered the British Navy, the general scheme of British naval policy and administration, and the British Expeditionary Force; and I see every sign that the organization of American defense as a whole falls far short of what is needed if the United States is to uphold her policies and not merely assert them, and if she is to guard not only against the risks inseparable from all international activities and, indeed, from all international existence, but also against certain specific obvious and imminent dangers. What I further see is the reproduction in the United States in an aggravated form of practically all the phenomena against which Lord Roberts tried, and tried in vain, to rouse his countrymen. I see the same plethoric, pot-bellied equanimity on the part of the average citizen, the same refusal to associate citizenship with duties, the same lazy, hazy belief that peace can be had by willing it, the same debilitating doctrine that defense is the business of the Government and not the concern of the community as a whole and of each individual man and woman in it. But an Englishman is perhaps more taken back by the presence in the United States to-day of certain features of life and opinion from which his own country has happily been exempt. I do not think that in the British Isles we were ever quite so bemused by sentiment as large sections of the American people appear to be. I do not think we ever wandered quite so guilelessly in such a cloudland of unrealities as that which now envelops the Middle West. I do not think we ever believed with such satisfying innocence that we were protected, without further efforts of our own, by some magic cloak or some Providential dispensation of invulnerability. And I am sure that the spirit of British nationality and the unity of British feeling have never been rotted by the disintegrating agencies now visibly at work in the United States. We have had weak and short-sighted Governments, but never one so seemingly indifferent to national security as that which now holds power in Washington. We have had many Parliaments that failed to think out the British military problem, but not one that bungled it so hopelessly as the present Congress has bungled the military problem of the United States. We have known times when the national interest in questions of defense was overshadowed by the national interest in questions of social reform. But we have never known a time when the popular mind was so difficult to rouse or seemed so wrapped in a complacent apathy or so immersed in materialism as is the United States of to-day. We have had those among us who preached a muddy and mawkish in-

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tornationalism, but I question whether in Great Britain patriotism, and the spirit of service and sacrifice, and a realistic sense of national honor and of the conditions of national existence had at any time been impaired as they seem to have been impaired in the United States. The war has undoubtedly cleared the British air of a multitude of unwholesome vapors. Is there no process that will purify the far more heavily impregnated atmosphere of America at a less terrible cost? Does it need a war to make America efficient? Will the United States, like Great Britain, fail to convert democracy into a reality and citizenship from a meaningless accident into an honor and a responsibility, except under the compulsion of the battlefield? Those, I think, are the ultimate questions propounded by this war for the judgment of the American people.

We in Great Britain lived before the war unarmed or armed only for defense while the Continent of Europe was one vast arsenal of war. Not dissimilar is the position of the United States. We relied for such striking power as we might need upon a small and highly trained professional army, with a somewhat larger but imperfectly organized body of citizen soldiery in the background. So does the United States. Like America, we were a trading community, meditating no aggression and wholly disinclined to consider war or protection against war as the chief end of our national being. While all the leading Powers of Europe had adopted universal military service, we trusted in an army raised on the voluntary system. That also is the present policy of America. Secure, as we thought, in our island home, shielded by an unequaled Navy, and possessed of abnormal wealth, we felt that on our chosen element, the sea, we could always give a good account of ourselves, that our Expeditionary Force would be a valuable addition to the armies of any European Power, that our wealth and industrial resources could furnish any Alliance of which we were a member with the indispensable sinews of war, that, beyond that, nothing would ever be required of us, and that we could afford to bless the happy fate that had exempted us from "the burden of conscription." I imagine that many Americans, looking to the size of their country, its aloof and seemingly impregnable position, and its potential reserves of manpower and material, argue in much the same way. But we were wrong and you also will be proved wrong if you elect to be guided by any such easy-going faith. If and when you become involved in a war with a Power of the first rank that is able to challenge your very existence as an independent State, you will find, as we found in 1914, that the defenses you have elaborated are insufficient and that nothing less than the arraying of the entire nation in arms will meet the needs of the crisis. You will be driven, as we ultimately were driven, to universal and compulsory military service. And then, like us, you will rise up and curse your folly in not having adopted, years beforehand, the only military system that consorts with real democracy, that can guarantee security, and that acts, if not as an infallible preventive, at least as a most formidable deterrent, of aggression. It is a moderately safe speculation that, had Great Britain adopted compulsion ten years ago, Europe to-day would be at peace. It is an even safer speculation that the United States has only to introduce the same system to render herself immune from attack for all time.

To compute all tnat our persistence

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in clinging to the voluntary principle has cost us would be to compile one of the most mournful catalogues of missed opportunities in human history. It meant first and fundamentally that as a nation we knew nothing of war. No nation except the American nation of to-day and perhaps China could have known less. The British people as a whole had but one strong conviction—or possibly instinct would be the better word—on the subject of national defense. That was that the British Navy should always be supreme. Otherwise they handed over the problem of insuring the national safety to their political leaders. They never made it their own affair. And in a democracy anything that is not the affair of the people, anything that does not arouse and hold a deep popular interest, is pretty sure to be neglected and mishandled. That is because it is the essence of democracy that movements should proceed from the bottom upwards, just as it is the essence of autocracy that policies should be imposed by those at the top on an acquiescent nation below. It is not the statesmen of Great Britain who have built up through the centuries the British Navy. It is the British people themselves. Without that passionate faith of theirs, bred into the bones of every Briton, that Great Britain as a free Power perishes on the day she loses command of the seas, our naval policy would have been a thing of shreds and patches, of backing and filling, a point of contention among parties, a something shoved by the "leaders" into the background as a quite secondary consideration. And that precisely has been the fate which for some hundreds of years, I should say since the days of Henry the Eighth, has overtaken our military policy. The British people before the war were almost as uninterested in the problems of the Army as are the American people to-day. It was a side issue in the national life. Its discussion bored them. Its technicalities repelled them. The idea that the Army either could or should be the Nation never occurred to them. When Lord Roberts attemped to popularize it, he was met with "blank indifference or with blame reproved." What an army was, how it fought, of what its equipment consisted or ought to consist—these were questions that the average man in Great Britain left comfortably to the experts and the politicians. He had had no personal experience of soldiering. He was without any inherited set of traditions on the general question of the place of the Army in the scheme of national policy—except the tradition that compulsory military service was a degrading form of discipline unworthy of a free-born Briton, likely to lead to "militarism" and foreign adventures, and superfluous in any event because the safety of the nation was already assured by an unconquerable Navy.

When, therefore, the war burst upon us, demanding from our people an unheard-of military effort, it found them obliged to improvise pretty nearly everything. It plunged them not merely into an unforeseen crisis, but into a new world, the very atmosphere of which was strange to them. The national mind had never been set to work on the problems that now confronted it, problems that had to be solved as soon as they were formulated and long before they could be thought out. What the authorities had foreseen and prepared for—the mobilization of the Regular Army, the despatch to the front of the Expeditionary Force and its proper equipment with the infinitely varied paraphernalia of modern war—was in general admirably carried out. But there both they and

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the nation had stopped. A war involving the employment and the maintenance of more than 150,000 troops had not entered into their calculations. The creation of huge armies running into the millions was an enterprise they had never even troubled to think of, so wildly improbable had it seemed that any such obligation would ever be laid upon Great Britain. They would as soon have dreamed of drawing up plans to resist an invasion from Mars. The plant, the organization, the machinery for recruiting the men, the officers to train them, the far more difficult problem of arming and equipping them—all these had to be grappled with at a moment's notice, in a frantic scramble, and at a prodigious cost. Had we had compulsory and universal service, the men would have been ready, the arms would have been ready, the uniforms and the camps would have been ready and we should have saved millions of pounds, months of delay, and the imminent risk of disaster. More than that, our people would have mastered the elements, at least, of the military art. They would have known something of what war is. They would have possessed some standards by which to judge of its incidents and progress. They would have been spared the experience of being violently shuttlecocked between facile optimism and an equally unreasoning depression. They would have been quicker to realize the magnitude of the crisis and to adjust their lives to the new conditions. And these are no small matters. When it is no longer armies but nations that go to war, the temper and the resolution and mental attitude of those who are left at home are the chief among those moral factors that determine the issue.

As it was we had to rush blindly, stumblingly, in the dark, snatching at anything and everything that would put us in shape to fight. Only the inventive genius of our people and their ready gifts of initiative and organization saved them. We did not even know what resources of manpower the country could count upon. It seems incredible now that any nation could have remained in such utter ignorance on a matter so vital to its existence. Or rather it would seem incredible were not the United States even now, even after the object-lessons of the past thirty months, in precisely the same position. It was not until the war had been going on for nearly a year, not until after a vast army of men had enlisted, that we passed the National Registration Act which for the first time placed recruiting on a more or less scientific and orderly basis. Under its terms not only had the actual occupation of every male and female between the ages of 15 and 65 to be declared, but also their capacity for any other business which might be serviceable to the country. A complete survey was thus made of the whole nation and of every eligible man and woman in it. At the same time various committees were busily at work weighing the comparative needs of the Army, munition works, agriculture, and other civil industries. Their recommendations, when put side by side with the results of the Register, made it possible to draw up lists of trades in the order of their national importance and to decide in the case of some of them that no workers, even though of military age, should be drafted from them into the Army. All the belligerents in this war have found that to extract the maximum of fighting power you must observe a just proportion between the claims of the Army and the claims of industry. It is the sheerest waste of time, money, and energy, under any system, compulsory or voluntary, to train men to

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fight and then to discover that they would be more useful making munitions or carrying on their normal trades. We made that blunder, and so did France and Germany. But it will be little less than a crime if the United States repeats it. I am very confident that every man who has been behind the scenes of this war would assert that, for a country like America, the first and essential starting point in any programme of preparedness is the compilation of a roster that will show at once the numbers, addresses, and occupations of all the men and women of military age in each state. Get that done and you would know where you were; each state could tell about at a glance which men could be spared for the Army and which ought to be retained in the trades that support the main fabric of the Nation's commerce or furnish the material of war; you would obtain a bird's-eye view of the whole situation and could form an exact estimate of your military and industrial power and of the contribution towards it that each man and woman—and nowadays you cannot wage war without women—was capable of making. If not British experience merely, but the experience of all the present belligerents goes for anything, that is the foundation of real preparedness.

I should be the last person in the world to belittle the splendor of the response made by the British people to the national call. Before the war it used, I believe, to be a point of substantial agreement among military experts that even a country with compulsory service could not put into the ranks more than ten per cent. of its population. We in Great Britain exceeded that percentage and still maintained the voluntary system. Over 5,000,000 men in the British Isles came forward and enlisted in the Army of their own free will, and before compulsion was applied. That was a demonstration of national spirit that has never in its way been equaled or even approached in the history of any land. Nor need one subscribe to the idiotic dictum of a British statesman that "one volunteer is equal to three conscripts" in order to feel and to declare that there was something peculiarly inspiring in this uprising of a free people in defense of the liberties of Europe and under no other compulsion than that which was applied by their own patriotism and sense of duty. Americans would have to raise an Army of at least 11,500,000 men in order to equal the British achievement. Before the war about 30,000 men enlisted in the Regular Forces annually. After the war began more than that number of recruits presented themselves in a single day. There was one week when a quarter of a million men joined up. Very little provision had been made, or, given the swamping suddenness of the crisis, could have been made, to receive them. Thousands of them lay down to sleep in ditches, after walking twenty miles and waiting for hours in a blazing sun till their turn came. So great, indeed, was the rush of recruits that the War Office felt impelled before the war was six weeks old to repeat, though in a modified form, Stanton's blunder at the end of the first year of the Civil War. Stanton absolutely shut down on recruiting and closed the recruiting offices. The War Office was not quite so foolish, but before the middle of September, 1914, it raised the standard of height and chest measurement and physical fitness in a way that but too successfully checked the flow of recruits, that went far towards convincing the British public that the extreme need for men was satisfied, and the deterrent effects of which were only undone by a

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prodigious campaign of oratory, posters, and newspaper advertisements. It was while this campaign was in progress that the defects of the voluntary system became most clearly manifest. The best men joined the Army at once; the slackers and the shirkers hung back; married men displayed an almost suspicious eagerness to enlist; single men proved unaccountably reluctant. Moreover, as time went on it became perfectly clear that the voluntary system was voluntary only in name and that it was being worked by a form of social compulsion that had most of the defects and none of the virtues of universal military service. Men who were not in khaki were jeered at in the streets and presented with white feathers by excited young women. That fearsome instrument of terrorism, "the opinion of the neighborhood," was brought to bear, unjustly often, harshly sometimes, ignorantly and indiscriminately always, upon all men who seemed to be of military age and who had not some visible token in the way of badge or uniform that they were "doing their bit." The public conscience revolted by degrees against the inequalities and inconsistencies of a system that allowed every man to do as he pleased, to volunteer or not to volunteer just as his inclination might dictate, and that penalized patriotism and self-sacrifice by shielding the loafer and the coward. The public taste and the public dignity were not less outraged by the highly effective but essentially vulgar and unworthy appeals for recruits that stared from every wall, resounded from every platform, and headed the advertisement columns of every paper. It was felt, not at first, but gradually, and at last irresistibly, that the war was not a thing to be "boomed" and trumpeted like a cinema actress or a new table water, but a great crisis in human history calling upon every man as of right to offer up himself and all he had. Slowly we advanced to the inevitable decision. We postponed it as long as we could, honestly believing that there was some virtue in a volunteer that a soldier who was a soldier merely because the law made him one did not possess. We tried first a plan of attesting all the unenrolled manhood of the country and dividing them according to age in groups for the military authorities to call to the colors when they were wanted. It was a good plan and, had we adopted it at the beginning of the war, it might have seen us through. But we found that many thousands of single men of military age had failed to signify their readiness to serve when called upon. The absurdity of summoning the Benedicts to redeem their promise while an appreciable number of bachelors had escaped giving any promise at all was too patent to be withstood. Compulsion was at once applied to the unmarried shirkers, and a few months later, in May, 1915, was extended to all men in Great Britain between the ages of 18 and 41. From that moment the national conscience was at rest. No one could possibly say that the British people were not pulling their weight or bringing their full power into play when they had thrown aside the most cherished of all national prejudices and stamped with their emphatic approval the principle of universal service. Then at last the burden was fairly distributed; all men stood on an equality of sacrifice; and British democracy received its final consecration.

No Englishman, however, looking back on it all, even while he recognizes the stupendous efforts put forth by the Government and by the people to keep the voluntary system in being,

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can help reflecting on the waste and muddle and injustices that might have been obviated had the war found us with universal and compulsory service in full operation. For in that case most of the questions that distracted the public mind during the first eighteen months of the war would never have been raised at all and most of the problems that diverted the Government from its supreme objective of killing Germans would have automatically settled themselves. Every man would have known where he belonged and what his duty was, where to report himself, and where to obtain his uniform and arms. There would have been no hurried pitching of camps on unhealthy sites, no dearth of officers to lick the recruits into shape or to put the more seasoned troops through their final paces, no drilling for months on end without rifles or kit or equipment, no shortage of food and doctors and transports, no such sense of bitterness and resentment as only the volunteer knows when he hears of soft civilian jobs filled by slackers who had heard the call of their country but had chosen not to heed it, no picking men raw from the streets and flinging them half-trained or a quarter-trained into the battle, no tumult of confusion and frenzied improvisation of makeshifts, but the setting in motion of a tested machine and its smooth and progressive rise to a calculated maximum of power. In mere money it would have paid us a hundred times over to have borne the undoubted burden of compulsory service for a couple of decades rather than to have faced such a storm as broke upon us in August, 1914, with nothing at our backs but the voluntary system. Unless Americans can be absolutely certain that they will never be drawn into a first-class war and that because they are peaceable, because they are wealthy, because they are unarmed, they are, therefore, safe from any attack by Powers poorer than themselves, infinitely better prepared for war, and by no means so pacific—unless they are convinced of the soundness of these doubtful hypotheses, then the cheapest investment I can recommend to them is the immediate adoption of compulsory service. Financially it would have saved us billions of dollars had our people after the Boer War divested themselves of the liberty not to fight for their country. But the financial gain would have been but a fraction of the increment we should have reaped from the systematic and obligatory training of our manhood in arms. We should have saved time—and time is the most precious of military, as it is of industrial, commodities; we should have saved energy—and energy in a life and death struggle is precisely what you cannot afford to waste; we should have gone forward briskly and confidently in the light instead of groping and fumbling in the dark; we should had despatched with a clear-cut swiftness and efficiency a business that sheer ignorance of its essentials compelled us to bungle and prolong. More than that, as I have already said, we might, I believe we should, have averted the war altogether. I cannot believe that even Germany would have provoked one of the most stubborn of the fighting nations of the world had that nation been ready for war. Still less can I believe that any Power will venture to attack the United States when the United States rests upon the broad basis of a citizen soldiery and shows itself alert to the conditions around it and determined to be their master and not their victim. You have in your hands the key to what is virtually an eternity of peace if—but only if—you arm and organize. Should you

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refuse, then all history is a lie if there is not stored up against you a day, and an early day, of terrible awakening.

There is another aspect of this question on which I should like to say a word or two. Ask any sane man in any of the warring countries what lesson has been most deeply driven into his mind by the events of the past thirty months, and he will answer unhesitatingly: "The value, the vital necessity, of encouraging during the years of peace as many private manufacturers as possible to engage in the production of war material." I am almost tempted, indeed, to say that that is the beginning and end of preparedness. By hook or crook you can always get the men. It is a much lengthier and an infinitely more difficult business to arm and equip them. Modern war is a war of factories. It levies an unceasing toll on every ounce of industrial knowledge and skill that a country possesses. It is a struggle of mechanics and chemists and artisans just as truly as it is a struggle of soldiers; and victory goes to the nation that knows how to turn the resources of its manufacturers and the efficiency of its workmen to the best account, and that has at its disposal the largest number of plants engaged in, or capable of being adapted to, the production of the vast and varied catalogue of implements required by the armies in the field. The industrial side of war is just as essential as its military side. But nothing can be plainer than that if your military preparations are on a small scale your industrial preparations likewise will be on a small scale. The one conditions the other. If you rely on a diminutive Regular Army and have no idea of how many volunteers will be needed to supplement it in war time, then you limit your industrial preparedness to the obvious and tangible needs of the moment. You see to it that your Regular Army and your Navy are adequately provided for. But there you call a halt. You cannot attempt to forecast a future that is a mere blank wall of unknown and incalculable quantities. You do not build plants and train labor on the off chance that some day 500,000 volunteers or 5,000,000 will be clamoring for guns and shells and rifles and uniforms in a hurry. We found in Great Britain that dependence upon the voluntary system meant preparing for war only after the war had begun, meant that there was a huge gap in our industrial equipment that had to be filled immediately and at any cost. How we have filled it, how we have erected over 100 colossal war-works, how more than 4,000 firms that before August, 1914, never dreamed of producing war material are now engaged in producing nothing else, how we have turned all our industrial arrangements and practices upside down to meet the emergency—all this it would need a volume, and a singularly fascinating and instructive volume, to set forth. Yet with all our efforts it will not be till this summer, three years exactly since the outbreak of the war, that we shall reach our maximum power; and what our failure to foresee the industrial demands of modern war has cost us in lives, in treasure, in spent attacks, is something no Englishman cares to think about. But it was a failure inevitable under the picayune standards of the voluntary system. Only if you adopt compulsory service can you measure your liabilities and shape your industrial preparations accordingly. Only if you know exactly the number of men that at a crisis will be called to the colors can you coordinate military and industrial policies and avoid the disastrous blunder of allowing the former to outrun the latter. Under the voluntary system

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you are working blindfold, never knowing at what moment or on what scale you may have to make demands upon your manufacturers that they cannot possibly fulfil. Under the compulsory system, with a definite quota of men annually entering the ranks, with the aggregate force at your disposal in time of war accurately ascertained beforehand, the output of war material automatically keeps pace with the numbers of men who will one day need it more than they ever needed anything in their lives.

It has been extremely interesting to watch the change that has come over the British mind since the adoption of universal and compulsory service. It is a change that might better be described as a revolution. Formerly, as I have said, the average Englishman looked down upon "conscripts" as little better than serfs. He exulted in his own freedom from "military bondage." This attitude on his part was quite natural and quite sincere. It marched with entire harmony alongside of his general sense of irresponsibility and his aversion to a disciplinary officialdom. That citizenship had its duties and its obligations as well as its privileges, that between himself and the State there would one day arise a question of debts to be paid and services to be rendered—this was as foreign from the ordinary British as it still is from the ordinary American view. Freedom in the eyes of the "man in the street" meant freedom to do pretty much as he pleased. He was a ferocious individualist. The conception of the State as a brotherhood that embraced himself and had the right to exact from him sacrifices which he, on his part, should have been glad to make, had well-nigh vanished from his consciousness. He was voluble on what the nation owed to him; he was reticent on what he owed to the nation. Eloquent about his "rights" and developing a progressively bitter spirit of class antagonism —an antagonism that was poisoning the industrial relationship at its source —he threatened to become about as futile and unpleasant a citizen as any that encumber this planet. But the war has given him a new perspective. He realizes that to take up arms at the bidding of the State is not to be subjected to a form of slavery but to exercise a proud privilege. He sees now that there is no freedom but in service and no happiness but in sacrifice. He has grown nationally self-conscious. He has felt for almost the first time that he was a working and considered unit in a great democratic whole, and that there was something else in life beyond the satisfaction of his own petty appetites. One cannot even begin to estimate the enormous contribution that universal service has made to the cause of British democracy; how it has blotted out class feeling, has made wealth and birth of no account, and has unified the nation by imposing upon all its members an equality of obligation. In that new England which will emerge from the furnace of this war, an England physically made over, inured to discipline, making character and achievement the test of honor, scornful of old distinctions, and insistent upon the bonds that link and not upon the divisions that separate rich and poor, employer and employed, the palace and the slum—in that vigorous and triumphant democracy compulsory military service, I hope and believe, will take a fixed place in the national fabric.

But if England has gained much and stands to gain still more by her conversion to universal training, what may it not be expected to produce in America? For in America, as it seems

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to me, the need for just some such leveling and energizing experiment is greater to-day than it has ever been in any white man's land. All the phenomena that a few years ago made one wonder whether England might not really be as decadent as the Germans thought she was—the waning of a robust patriotism, the State-blindness of the average citizen, the growth of an untrammeled egotism that hurled class violently against class, the absorption in pleasure and money-making, unwillingness to look disagreeable facts in the face, the yet greater unwillingness to sacrifice private ends for the public good—all these phenomena luxuriate in the United States of to-day with a rankness rarely, I suppose, equaled and never surpassed in history. And in addition, America suffers from a plague which happily has never infected us in England, I mean the plague of racial schism, of divided allegiances, of an imperfect unity of thought and emotion. How to weld this medley of races, scattered over so vast and isolated a continent, into a genuinely American totality—that is the problem. The schools have done much to solve it, but it is clear that the factors which impede the development of a really national consciousness are growing yearly too strong for them. I see, myself, no agency in sight that can do even half as much as compulsory military service to restore a juster sense of values to social life, to take the edge off class strife, to instil the spirit of service into your self-centred millions, to sharpen the wits and add to the physical well-being of the average man, to make the democratic theory a fact, and to bring all the disparate elements of the Commonwealth within the folds of a visible and realized Americanism. Not since slavery has any issue appeared that so closely touches the security of the American people and the quality of American democracy.

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The SPRAWLER

By HERMANN HAGEDORN

Who says my brother is base?
  Who says he is sunk
From the knight's, the hero's place,
  And sleeps on his dollars, drunk,
Fat with feasting and wine?
  Who says in his ire
He has lost the gem divine
  In the muck and the mire?
Not I, my brother, not I!
  You will not forget
Spirits who dared defy
  Hunger and bayonet,
Eyes fixt on high!
  You are noble yet!

Gold has not dulled your brain
  Nor locked your ears
To mendicants in pain!
Not basely for your gain
  You dip in dust your spears!
Tongues that implore
  From sea and bloody ground;
Justice from door to door
  Whipped like a hound;
Faith, beaten low, shall cry,
  Nor by deaf ears be met!
Who says you decay? Not I!
  You are noble yet!

You are true, you are brave,
  And fire sleeps in your blood!
You would laugh at ease and the grave,
Valiant to save,
  If you understood!
Not long should the lie be heard
  That you must have gold
Though your fame be slurred
  And your flag be sold!
Not long should men cry
  Their calumnies—
"Though freedom die
  He must have his ease!"
There would be flame in your blood
If you understood!

This earth we gaily ranged
  For new sights and new fashions,
Is stricken, changed,
  And flung back to old passions.
You dream as though no word
  Had been given and broken;
No foolish king, no sword,
  No cannon had spoken;
And this war-racked purlieu
  Of Hell and outer night
Were the dear Earth we knew
  That struggled toward a light.

Who says you are base? Not I!
  You dream. For a day
You sprawl and stare at the sky
  And whistle the world away;
And murmur a hint to the stars,
  And shake a wand at the storms,
And make an end of wars
  With spells and fairy-charms
Of wildflowers, plucked apart—
  And lo, as the black ring closes,
With the sword-points at your heart,
  You smile, and call them roses.

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An ARMY *of the* PEOPLE

A CONCRETE PICTURE OF A DEMOCRATIC UNIVERSAL SERVICE ARMY

By MAJOR JOHN MCAULEY PALMER

(*General Staff Corps [Infantry], U. S. Army*)

[This is the fictitious history of the organization and training of an American National Army recruited under the principle of universal military training and service. The author has adopted the fictitious method in order to describe this national army as if it were an institution actually in being, and in order to avoid a monotonous treatment of the many details of military organization.

As originally published by Putnam's, "An Army of the People" described the organization and training of a national volunteer army. At the request of NATIONAL SERVICE, *and with the consent of G. P. Putnam's Sons, Major Palmer has rewritten it to meet the conditions of universal military service.*—THE EDITORS.]

I

PUBLIC OPINION AND THE NATIONAL DEFENSE

THE American National Service Act received the President's approval on the 16th day of January, 19—. Considering the revolutionary character of this great piece of constructive legislation, it is still astonishing that so elaborate a system should occupy the attention of Congress for little more than five weeks.

The advocates of an effective national military system expected a long period of preliminary agitation, with a gradual development of public opinion. But when a few courageous leaders frankly presented the issue of national security to the common sense of the people, the response was overwhelming and immediate. This condition of the public mind materially simplified the legislative problem. That our military institutions were antiquated, expensive, and inadequate was the general consensus of public opinion. That the public intelligence demanded a sound, sufficient, and businesslike solution of the problem of national defense was equally apparent. Under these circumstances it was only necessary for Congress to crystallize the public will into the form of law.

The limits of this brief history do not permit a full account of this remarkable development of opinion. But fortunately it is possible to give its essential outlines through extracts from the Congressional debates that preceded the passage of the law. The following passages are therefore taken from the celebrated opening speech of Senator Straightedge:

"Mr. President," said the Senator, "I do not profess to be a military expert. But I am a man of business and I believe that many questions of military policy can be approached to advantage from a common-sense business standpoint. I believe that we need an army or we do not need it. If we do not need it, the existing force should be abolished and not another cent expended upon it. If we do need an army we should make it sufficient in strength and effective in equipment and training, and it should be con-

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ducted on sound business principles. To continue to maintain it ineffectively organized and at a notoriously inadequate strength, to my mind, is incomprehensibly absurd.

"Now Mr. President, what do we want an army for? I take it that we want it to defend the territory of this country and the legitimate interests of this country against any hostile or unfriendly combination. We want an army that will be adequate for the conditions of to-day or to-morrow, or for the conditions of a hundred years from now. We want sound military institutions firmly established and perpetuated to meet our military requirements for all time. We do not want a partial solution of this problem. We want a complete and final solution, one that will permanently meet the requirements of America.

"Mr. President, we have recently had some activity in military legislation and have enormously increased our military budget, but have we made any real progress? Let us test it by the probable requirements of a great war, one that would really tax the power and resources of this nation. In such a war it is conceivable that we might need an army of two million men prepared for immediate resistance on either coast. Will our present establishment yield such a force, either this year or ten years from now? We have expanded our professional Regular Army, we have transferred our state militia to the Federal pay roll, we have taken some very commendable steps toward preparing young men for duty as reserve officers. But have these measures prepared us for war? Not theoretical war—but actual war such as convulses Europe to-day. Will these elaborate and costly institutions of ours bear the furnace heat of actual combat under modern conditions?

"Mr. President, I am not a technical military expert, but I am able to understand some of the broad lessons of history, and I believe that history offers a conclusive answer to the questions I have been asking. Since the beginning of the present world war I have gone back to history again, and the salient fact that I find written there is this: *Wars are no longer fought by armies, they are fought by nations in arms.*

"Our military institutions form a solitary survival from the eighteenth century. The paid professional army found its culminating type in the army of Frederick the Great. Frederick won his victories because his mercenary army was better trained and better led than the other mercenary armies of his time. But Frederick stood at the close of an old era that was passing, never to return.

"Only a few years after Frederick's death, this old régime collapsed in the explosion of the French Revolution. With this new birth of democracy, tremendous new energies were released. Democratic France was drawn into war and she fought not with an army but as an armed nation. Before this powerful new institution the old type army could have no hope of victory. For Austria it died at Marengo and Austerlitz; for Prussia it died at Jena and Auerstadt, where the army perfected by Frederick the Great was driven in shattered fragments from the field. Napoleon was only an incident in this great outburst of national energy. While he was true to it, it bore him to victory. After he betrayed it, it could not save him from defeat. From Leipsig to Waterloo he was opposed by a rejuvenated Prussia; reorganized by Stein and Scharnhorst not on the old model of Frederick, but upon the new model of the nation in arms.

"Mr. President, the French Revolu-

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tion and the Wars of Napoleon swept the old professional type of army from the continent of Europe. It was replaced everywhere by the institution of the armed people or the nation in arms. It disappeared from the world except in insular England and the United States. It belongs to the time of the flint-lock musket and is just as obsolete, just as inappropriate for modern war.

"And now it survives with us alone. For in the supreme crisis of these latter days, even England has learned that modern war demands the entire manhood of the nation. This relic of an autocratic age survives only in democratic America.

"Mr. President, this is the question for us to consider. Are we to base our military preparations on an outworn hypothesis of the eighteenth century, or are we to face the facts of to-day and to-morrow? I am not among those who are frightened by any immediate prospect of war. I do not believe in injecting the hysteria of the war scare into the discussion of this question. What we want is sound military institutions, institutions that will bear the actual test of war. Now what will this test be? When we next go to war, what will we have to fight against? Mr. President, the answer is very clear. When we go to war again it will be to fight against one or more armed nations and not against armies of the eighteenth century type. And what will be the result? If we go to war as an armed and organized American nation the result will be victory. If we go to war with our present antiquated military institutions, the result will necessarily be humiliation and defeat."

Senator Skimp. "Will the Senator yield for a question?"

Senator Straightedge. "With pleasure."

Senator Skimp. "Am I to understand that the Senator is dissatisfied with our recent very extensive expansion of the military establishment?"

Senator Straightedge. "I was disposed to be satisfied with it a few months ago, but I find on more mature reflection that the problem is probably something more than a problem of expansion. We need more powerful military forces than we have had in the past, but they must also be different in kind. I do not believe that we can expand a flint-lock musket into a 42-centimeter field howitzer."

Senator Flaw. "Will my colleague yield for a question?"

Senator Straightedge. "With pleasure."

Senator Flaw. "Am I to understand that the Senator favors universal military service?"

Senator Straightedge. "That is the inevitable conclusion of my argument and I am gratified that the Senator has anticipated it."

Senator Flaw. "May I ask the Senator if he recalls a speech which he made before our state legislature in July, 1915, in which he stated that he was a firm believer in voluntary military service?"

Senator Straightedge. "I recall the incident very distinctly. I believed in voluntary national service then and I believe in it still. I still believe in giving military training to all our young men who are willing to receive it, but I have grown more generous as I have grown older. I am now willing to extend the privilege to all the young men of the nation, whether they are willing to receive it or not. I am no longer willing to restrict either the duty or the distinction of national service to a few of the people. If we are to have Verduns and Sommes in our future history, I am unwilling that the generous, the impulsive, and the

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brave alone should bear the burden. We must have all the people because we must be sure victory beyond the shadow of a doubt. We must have all the people because that is an inevitable corollary of democracy."

"And, Mr. President, this demand for universal manhood service as a corollary of democracy is not a new cry in history. Over two thousand years ago, when Athenian freedom was about to fall before the ambition of Philip of Macedon, Demosthenes spoke to his fellow citizens in these words: 'Yet, O Athenians, yet is there time. And there is one manner in which you can recover your greatness, or, dying, fall worthy of your past at Marathon and Salamis. Yet, O Athenians, you have it in your power, and the manner of it is this. Cease to hire your armies. Go yourselves, every man of you, and stand in the ranks; and either a victory beyond all victories in its glory awaits you or, falling, you shall fall greatly and worthy of your past.'"

Senator Flaw. "Will the Senator yield for another question?"

Senator Straightedge. "Yes."

Senator Flaw. "May I ask the Senator if he recalls the last meeting of our state association for the propagation of international peace? On that occasion my distinguished colleague made a brilliant speech in which he avowed himself to be a pacifist and an enemy of war. Notwithstanding our long-standing difference of political affiliation I have always admired my distinguished colleague. I admired him and applauded him particularly on that occasion, and I fear that it will be a matter of profound grief in our state when it becomes known that he has abandoned the cause of peace."

Senator Straightedge. "I will answer the Senator's question. I remember the occasion he mentions. I was a pacifist then. I am still more a pacifist now. But I want a peace for America that is not at the mercy of peace-breakers. I want a peace for America that will endure in spite of peace-breakers."

II

THE SWISS MILITARY SYSTEM

A few days after the discussion recorded in the last chapter, Senator Whirl described the Swiss military system in a speech from which the following extracts are taken:

"Mr. President, this debate is degenerating into a discussion of technical details which to my mind are beclouding the issue. Let us get a general perspective of the house before we examine the blue-prints. The problem before us is to devise a system of national defense sufficient to meet the test of war and appropriate for democratic institutions. This is a difficult question if we treat it abstractly. It may be simplified somewhat if we examine it in the light of a concrete, practical solution. I have been very much impressed by the economical and democratic military system developed by our sister republic in the Alps. I find many things in her solution of the national military problem that seem worthy of study by us.

"Under the Swiss system, Mr. President, all able-bodied young men are required to undergo a short but thorough course of military training. Throughout Switzerland, convenient centres for military instruction are established, and every young Swiss is required to receive recruit instruction at one of these centres before he enters business life. Here he is thoroughly trained by expert military instructors furnished by the Federal Government. At the conclusion of this recruit training, the trained recruits of the year are absorbed into the National Field Army

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and thereafter attend annual manœuvres as members of their home battalions. Thus each young Swiss gives a part of his twentieth year to recruit training, and after that he is mobilized with the National Field Army for a short manœuvre period each year. After twelve years' service with the Field Army, he passes to the Landwehr Reserve and his active military training is concluded, unless he qualifies for further service as an officer or non-commissioned officer.

"It thus appears, Mr. President, that in Switzerland a completely organized army is ready at any time to spring from the body of the people, and yet in time of peace this great war force is only embodied as an actual military force for a short period of about two weeks at the end of the summer. For several months before the annual mobilization, the recruits of the year are receiving their initial training. During the rest of the year, all the army is absorbed in the mass of the people, and engaged in the pursuits of peace, except the recruits under training and a small corps of trained officers and non-commissioned officers who constitute the permanent staff required to provide for the enrolment, training, supply, and mobilization of the war force.

"The benefits of such a system, both to the nation and the individual, are apparent. From the standpoint of economy, nothing could be more satisfactory. Such an army as a whole requires no barracks or quarters or permanent military posts. When it assembles, it assembles in the field, and knows no life except the real soldier's life in the open air. Practically all the money expended upon it goes for arms and ammunition and necessary clothing and equipment. Relatively little money goes for unproductive supplies or plant. Considering the entire force, it is a charge upon the nation for only two weeks in the year. And yet it is embodied long enough to give a substantial return in military power. Its recruits are thoroughly trained to march and shoot and live in the open. Its mobilization plans each year receive the practical test of concentration for manœuvres. All of its fighting organizations actually exist and function in time of peace, and are in the field long enough each year to test the troop-leading abilities of the higher commanders and their staffs.

"And, Mr. President, such a military system is equally well adapted to the requirements of industrial life. It concentrates the training of the individual citizen into a period where his economic value is a minimum. It does not divert the schoolboy from his studies, nor the business man from his occupation, for the recruit period of intensive military training comes in a period that naturally marks the interval between school and business life. And even the subsequent summers on the active list, though they demand short annual manœuvre periods, are passed before the citizen is absorbed in the cares and responsibilities of industrial and family life. Indeed, while the system takes little from the productive period of the citizen's life, it adds enormously to his industrial and civic value, for after his military training he goes into business with better conceptions of discipline, organization, and civic responsibility, and a stronger and more vigorous physique.

"In short, the Swiss system tends to produce the maximum number of trained soldiers in war with the minimum number of professional soldiers in peace. For while the Swiss Army comprises all the vigorous young manhood of the nation, the permanent peace establishment in Switzerland is limited to the small corps of specially

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trained experts who are necessary to maintain the machinery for training, organization, and mobilization.

"This, Mr. President, is the practical and sensible example that democratic Switzerland offers to democratic America.

"Let us give all our able-bodied young men a short but thorough military training. For this purpose let us organize one or more centres of military instruction in every state in the Union. Let us employ the best officers and non-commissioned officers of the existing Regular Army as instructors in these schools and thus transmit the best traditions of West Point and the Army to the great war host of citizen soldiers. Let us reënforce this professional training corps so far as necessary from the National Guard and from all other classes of citizens who have already received military training. Let us then organize our trained youth into divisions and field armies under uniform and definite national control, and let us count on this mighty force as our main defense in war, our main insurance of peace.

"This being the National War Army, we may then safely restrict the professional soldier to those military functions which are exclusively appropriate for professional soldiers. A professional army will still be required to garrison our outlying possessions and to defend great naval bases like Panama and Pearl Harbor from sudden attack. Small reserves of professional soldiers will also be required for expeditionary forces in small wars, for temporary occupations of foreign territory, and for other sudden emergencies. And further, as I have already suggested, the professional military expert in the Regular Army will find a new, and indeed his greatest, field of usefulness in training and organizing the great war army of citizen soldiers."

III

AN AMERICAN MILITARY SYSTEM

Senator Whirl's speech on the Swiss military system was received by the Senate with profound interest. The following extracts from the *Congressional Record* show the further progress of the debate:

Senator Flaw. "Mr. President, the Senator has presented an attractive picture of the house of national defense. It is indeed a pleasant picture for us. We are to solve the problem of national preparedness by giving every young man a two-months' summer outing, to be followed by two or three annual picnics. Mr. President, this is indeed an attractive picture, but unless it is a true picture it is a most dangerous one. The Senator called my attention to the Swiss national army some months ago, and I must confess that at the first blush it appealed to me greatly. But I am not a military expert and I determined to consult expert opinion before I could accept the Swiss system as an appropriate model for us. I therefore consulted my friend, General Maguffin, and he assured me most positively that soldiers cannot be prepared for modern war unless they receive two years of intensive military training and discipline in a regular army. Mr. President, General Maguffin is a distinguished professional soldier of almost forty years' service in the Regular Army. His view on this question is very generally confirmed by the conservative opinion of his profession. I am greatly interested in this question, but my interest is purely an amateur interest and I hesitate to oppose my amateur opinion to the highest expert professional opinion."

Senator Straightedge. "Of course, Mr. President, I cannot speak on this question with professional authority.

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Being a layman, my brain does not secrete military wisdom automatically, and I am therefore compelled to arrive at my conclusions by the slower processes of investigation and research. My researches, however, have been painstaking and they lead me to the conclusion that military history does not confirm General Maguffin's view that it is necessary for a patriotic citizen to serve two years in a regular army in order to prepare himself for the duty of national defense. On the other hand, Mr. President, I accept the wisdom of the old proverb that one swallow does not make a summer, and I am equally convinced that one summer will not make a soldier. No sensible man can believe that to be possible, and it is not considered possible even in Switzerland."

Senator Whirl. "But, Mr. President, that is precisely what is accomplished by the Swiss military system. The Swiss infantry recruit receives sixty-seven days' training in his twentieth summer. After that training he is enrolled in his home battalion as a full-fledged soldier. This is possible because the Swiss have perfected a scientific system of intensive training. With the same system of training we can accomplish the same result. They make an infantry soldier in sixty-seven days, an artillery soldier in seventy-seven days, and a cavalry soldier in ninety-two days. I can establish these facts by authentic official documents."

Senator Straightedge. "I do not dispute the length of the so-called recruit training, but how about the subsequent summers? In my study of the Swiss system I have quite failed to gather the impression that the Swiss infantry soldier serves for only sixty-seven days."

Senator Whirl. "The sixty-seven days form his one prolonged period of individual training. He does turn out each year for manœuvres with his battalion. The infantry soldier attends seven of these annual manœuvres, lasting from eleven to thirteen days. But the object of these manœuvres is to test the organization, to try out the officers."

Senator Straightedge. "Quite true, Mr. President, these annual manœuvres are for the team training of the entire force, but they mean strenuous work and training for every individual soldier. During these manœuvre periods, they march, and bivouac, and intrench, and deploy just as in war. They work night and day just as they must work in an actual campaign. After a long day's march with heavy knapsacks on their backs some of these infantrymen must spend the night on outpost duty. Others must practise the attack and defense of positions during the night or just before dawn. They do not listen to lectures about trenches, they dig them. I think we must count this time in reckoning the training of the Swiss soldier. If we count all the time that is required of the Swiss infantry soldier before he passes to the Landsturm or final reserve we find that it amounts, in all, to more than six months, with from eight to ten hours of strenuous work each day. Nor is this all, for the Swiss infantry soldier must qualify as a marksman for each of the twelve years of his service in the first line, and he must make this qualification in his own time. The Government furnishes him the ammunition and a place to shoot. He can arrange the rest of the details to suit himself, but he must make a qualifying score each year, and must take such additional time for practise as may be necessary to accomplish that object. A good shot might qualify in one day. A poor shot must practise every Sunday and holiday until he

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succeeds in making the minimum qualifying score."

Senator Flemm. "It would be necessary, then, to give an American boy from seven to eight months of intensive military training in time of peace in order to put him on a footing with the Swiss soldier?"

Senator Straightedge. "Yes, assuming that he has already had the preliminary physical and disciplinary training of a Swiss boy before he starts his purely military training. If the American boy you have in mind is undisciplined and untrained physically, then you must add enough to your total to produce that result before he begins his formal military training."

Senator Flemm. "But can't we assume that the average American boy of nineteen is as ready for recruit training as the average Swiss boy of the same age?"

Senator Straightedge. "Mr. President, that is exactly what we cannot assume. It is that very assumption that has misled so many superficial observers of the Swiss military system. The Swiss boy before he takes his recruit course is already well advanced in the fundamental training of a soldier. From his ninth year in school he has had daily physical drill in the schools under a progressive system that is carefully supervised by the Federal authorities. Through that system each Swiss boy is given a sound physical development and has fully acquired the habit of military obedience. For these daily physical drills always include movements in unison in response to sharp words of command. The result is that every Swiss boy has a trained body that is disciplined to respond athletically to his own will, and every group of Swiss boys is disciplined as an organized unit to respond to a directing will. Furthermore, the Swiss recruit is already a trained marksman, for rifle shooting is the universal national sport which is supported largely at the expense of the National Government. If you propose to give an American boy the limited training that is given to a Swiss recruit you must include an equivalent for the training that the Swiss boy has already had when he reports as a recruit. If the American boy lacks that training when he reports as a recruit, then you must increase his period of purely military training by an equivalent amount. Otherwise you cannot expect an equivalent result."

Senator Flemm. "Will the Senator give me his opinion as to the length of training necessary to prepare a soldier for military operations?"

Senator Straightedge. "I find that in the war now in progress, it is considered undesirable to employ raw recruits in the first line of battle until they have had a year of training. Recruits have been thrown in to replace losses in established units before they have had that training, but it has been a matter of necessity and not of choice. I find that in spite of the great pressure of emergency, Great Britain trains and disciplines her new soldiers for at least a year before she employs them in the first line of battle. I find that our military authorities have officially recorded their opinion that a dependable soldier cannot be made in less than one year, and I am unable to find anything in a critical study of the Swiss military system that would tend to controvert that view."

Senator Whirl. "Does the Senator recall the fact that he first directed my attention to a study of the Swiss military system? Only a few weeks ago the Senator assured me that he found much to admire in the Swiss solution of the problem of national defense."

Senator Straightedge. "There is

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much to admire in it. In the first place it is a genuine democratic military system erected on the fundamental democratic principle of universal obligation to military service in war and universal obligation to prepare for such service in time of peace. It provides a system of universal training that is sound and sensible for Swiss conditions. It permits no exemptions from service except for physical disability and it requires all citizens who cannot give service in kind to contribute in cash. It requires a necessary minimum of training for all young men, and requires those who have gifts of leadership to undergo additional training in order to develop themselves as officers and non-commissioned officers. It enrolls and develops the genius and brain of the people as well as the brawn of the people. It does not hire its young recruits to undergo training; it takes their services as a duty to the nation and pays their actual expenses only. In order to develop national leaders from among the people, it opens the avenue of military promotion to all citizens of tested ability. It applies to the whole nation the underlying principle of our West Point training, that he who would command must first learn to obey as a private in the ranks. It reduces the number of professional soldiers to a minimum consistent with efficiency, but it places the training of its recruits, the military education of its officers, and the general supervision of the military system in the hands of highly trained professional experts. It provides an organized national war army, definitely formed in localized tactical units so that each citizen soldier serves in peace in the same local organization in which he is to serve in war. It provides for mobilizing this territorial army annually so that its organization, its equipment, its supply system, and the capacity of its officers can be inspected and tested each year.

"Indeed, Mr. President, the Swiss national army is a useful model for us in so far as it is a democratic army of the people. But we must not forget that it is an army of the Swiss people adapted in its details to Swiss needs and the Swiss environment. In adapting such an institution to our needs we must not forget that the national problem of Switzerland is not the same as the national problem of America. It is for us to create an army of the American people as appropriate for American conditions as the Swiss army of the people is appropriate for Swiss conditions.

"Mr. President, if we should train every young man in his nineteenth year, our numbers are so great that in a few years each individual would pass the practical period of military liability. We would have enough trained soldiers in their twentieth year to dispose of any purely American situation such as an occupation of Mexico. We would be able to fight a great war without calling out any private soldier over twenty-three years of age. Under such a system each citizen's actual period of military obligation would cease before he is settled in family and industrial life. Indeed, under such a system the probability of a military enterprise against America would be almost negligible.

(To be continued.)

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The ORGANIZED MILITIA *in its Relation to the National Defense*

By Louis L. Babcock

[*Mr. Babcock enlisted as a private in the 65th Regiment, N.G.N.Y., in 1890. He served for several years as private, non-commissioned and commissioned officer. At the outbreak of the Spanish War he was appointed Captain and volunteered with his regiment for Federal service. In 1902, he was commissioned Judge Advocate with the grade of Major, and served in that capacity on the staff of the Fourth Brigade, N.G.N.Y., until 1915, when he was retired after twenty years' active service.*—The Editors.]

THE difficulty incident to the employment of the organized militia in the first line of national defense is due mainly to the limitation of powers conferred upon the Federal Government under Article I, Section 8, Subdivision 16 of the Constitution. Although the Constitution states that Congress shall have power to provide for organizing, arming, and disciplining the militia and for governing such part of it as may be employed in the service of the United States, it expressly reserves to the states "*the appointment of the officers and the authority of training the militia according to the discipline prescribed by Congress.*" This provision of our organic law confers upon the states the power of appointment of the officers and the authority of training the militia in time of peace so that it may take its part in the defense of the country during war. When war is imminent the Government must receive a force attempted to be prepared for that emergency by more than two score of separate sovereignties. All the states must act as allies in the preparation and training of a force for the common protection. Such a scheme of defense will never be successful; for it leaves too much latitude for the play of politics and sectionalism. A military force should be trained under a uniform system and be prepared for service by the power which is to use it. History furnishes no example of nearly fifty separate allies successfully training a force for the common defense. The War Department has no constitutional right to assume charge of the *instruction* of the organized militia, and while Congress may withhold its appropriations from states whose troops do not reach a prescribed standard of efficiency, this plan cannot be relied upon because it is penal and not constructive. In a few of the states politics have been eliminated from the National Guard; in many of them officers are selected for their political rather than their military qualifications. Hence, the efficiency of the organized militia varies all the way from a high to a low standard. Under the system of state control it is clear that the National Guard can never attain adequate efficiency in all the states but will ever remain an ill-balanced force, lacking uniformity and

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efficiency in essential particulars. These defects have always existed in the organized militia of this country.

Under the same section of the Constitution Congress is given power to raise and support armies. A great majority of the military students whose opinions are entitled to consideration have advised that the Federal Government raise and train its own force under this clause of the Constitution rather than rely upon the coöperation of the states in training an organized militia.

The soundness of these views has been tested twice in actual practice within the past twenty years. When the Spanish War was declared the National Guard regiments of the country were asked to volunteer. Most of them had a strength of less than six hundred officers and men, and nearly all were composed of eight, or, at the most, ten companies. The regulations of the Army required twelve companies, so a new battalion had to be enlisted in nearly every regiment. The strength of the companies at first was fixed at eighty-four, but this subsequently was increased to one hundred and three men. Those requirements made it necessary to expand greatly the existing organizations, and, as many men failed to volunteer or were rejected for physical disability, a large majority of the personnel were raw recruits who had no training whatever. The result was what might have been expected. It is needless to specify the causes of the failure of the Guard to respond adequately to the slight demands made upon it by the Spanish War. It is not a creditable chapter in the military history of this country. Upon the conclusion of the war a diligent attempt was made to avoid a repetition of these mistakes in any future emergency. The members of the organized militia went to work in most vigorous fashion, and its officers and men, educated by service in the field, loyally attempted to cure the defects which had developed while their commands were in service.

Many years passed by during which the officers and men of the Guard gave to their duties an amount of work and study deserving of the highest praise. In fact, the intensity of the required effort drove many of these men out of the service. Standards were raised and increased proficiency was attained in many states.

After eighteen years of hard work another call for duty came, and in June of last year the National Guard was ordered to Texas for duty on the Mexican border. A member of the General Staff is reported to have stated before a Congressional committee that the mobilization report shows that of 128,000 enlisted men in the organized militia inspected on the border, 81,179, or 63 per cent., were either transferred from militia organizations not called out, or were new recruits, leaving only 37 per cent. of the force representing the National Guard on the rolls of the organization in question at the date of the call of the President. Of those on the rolls at the time of the call, 47,657 were lost for various reasons during transition into the Federal service. This had the effect of making the National Guard, as actually mobilized, a volunteer force. Of the number lost, 7,258 failed to respond to the call at all, and 23,721 were rejected for physical disability. Sixty-three per cent., or 81,263 men, of the force which reached the border had received less than three months' military training of any kind, *and more than 60,000 men had none at all.* Very few of the organizations were enlisted up to war strength, and when they left for the field it was

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found impossible to obtain recruits in sufficient numbers to fill up the vacancies. These conditions resulted from the system itself and no imputation rests upon the officers and men of the commands. The National Guardsmen who did respond are entitled to great credit for their patriotism and their loyalty.

It should be observed that the defense system as embodied in the bill of June 3, 1916, did not have a fair trial in the recent mobilization. The scheme prescribed by Congress had not become fully effective and yet it was attempted to be applied to organizations whose members had enlisted under different laws and who were forced, by the logic of events, to assume a duty which they never expected to be called upon to perform.

It is too early to draw many correct deductions from the Great War, but one fact stands out as demonstrated. The warring nations, and especially the Central Powers, have shown the world that the military power of a nation at any precise time depends not upon the number of its citizens capable of bearing arms *but solely upon the number actually equipped, trained, and prepared for war.* This is a military axiom as old as war itself and the present one has furnished an impressive confirmation of its truth. For an illustration of this we have only to look to Canada, our northern neighbor. With a total population of less than New York State she now has nearly 300,000 trained and equipped soldiers under arms, many of whom are veterans.

Before men are fit to engage in modern war they must be highly disciplined. If they are not prepared when war is declared, from six months to a year must be allotted to their training. It is not merely a question of teaching men to drill or to perform the ordinary military routine. They may not use any of these accomplishments in any battle in which they may engage. The real purpose of drill is to train the soldier's mind and body to habits of precise, unhesitating obedience to the will of the leader so that in the stress of battle he will obey without conscious effort as the easiest and most natural line of action. Discipline is a plant of slow growth. Like all habits, it is slowly acquired. After training many thousands of men in the Regular Army it has been found that a period of about an hour, including short rests, is all that can profitably be used for a single drill. The remainder of the instruction period is habitually used for some other kind of instruction, which may or may not conduce to the formation of a disciplined mind and body, which is the main object to be attained. Hence, military instruction, in order to be efficacious, should be intensive and not extensive. It must be continued at frequent intervals and not be too intermittent. It is impossible to impart discipline to a soldier by drilling him on a Monday night for an hour and then postponing further disciplinary measures to the Mondays of the following weeks. He should be under the will and control of his commander twenty-four hours a day and seven days a week during the necessary period of training. It is continuous and unremitting effort which inculcates discipline, without which a soldier is well nigh worthless.

The term of training of a National Guardsman in the states where the Guard is maintained at its highest efficiency may be roughly summarized as follows:

The soldier enlists for a period of three years' actual service. If he is diligent, enthusiastic, and his business permits, he can get a maximum of

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forty-eight weekly periods of indoor drill and instruction each year, which includes indoor target practice. These periods will not exceed one and a half hours each and the time the man is actually under drill is about one hour each week. He therefore receives about forty-eight hours of drill per year. A comparatively small percentage of the organizations in this country are so located that adequate gallery rifle practice can be given. Exclusive of the indoor work, a man may receive yearly not more than a fortnight's field instruction and field rifle practice. If the soldier serves faithfully for three years he will receive actual instruction in the armory for a maximum of one hundred and forty-four hours, aside from his field work, which may or may not occur yearly. Military instruction is necessarily a side issue in his effort to rise in his chosen trade or profession. As he grows older and becomes more proficient in military duties he usually marries or has dependents who rely upon him for support. When he becomes best qualified to bear arms he is usually least fitted to be called for war service by reason of his age and his relations to his family and to the community of which he is frequently an important part. This is especially true of the commissioned and non-commissioned officers who are the backbone of the organizations. The preparation of men for modern war requires an intensive training and not one scattered over a period of years, which results in giving the man a fair degree of competency at the precise time he is least eligible to serve in the first line of his country's defense. Present conditions demand a high degree of instruction and a thorough training in the field. It is obviously impossible for an enlisted man to receive such training in peace times whilst he is immersed in business and social duties which necessarily engross nearly all his time and consume his best thought and energies. It is the continuous training over an extended period that makes a man efficient as a soldier; not desultory and periodic instruction extending over several years. An ideal soldier is one who has the resiliency of youth; not one who has contracted the love of comforts characteristic of a man of mature years and who has, to a certain extent, lost the activity of his youth.

The officer must know all that the soldier has to acquire and should have a better physique, for his labor is more severe. He must also understand the elementary principles of war. Drill, rifle practice, the care, use, and adjustment of equipment, the proper handling of the Army ration, map reading, sanitation, first aid, how to march and camp men, and a hundred other things must be thoroughly understood; but, above all, to be efficient and fit he must know how to lead men. He must acquire an educated military judgment. The ability to command must become a habit. He should be so sure of himself that when the emergency comes he will lead his men with skill and they will follow him with confidence. Any order which he receives must be obeyed, both in letter and in spirit, for to attain efficiency there should be absolute coördination between many different units. All this requires long training on the part of the officers, which can only be acquired by service with a large force under conditions closely simulating actual war. There is no easy road to this knowledge. It must be learned during actual training in the field with troops and by assiduous study of the technical works. It is an accepted military maxim that a recruit does not make an effective soldier until his

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captain becomes a good captain. All this takes time. What Washington said in 1780 holds true to-day:

"No militia will ever acquire the habits necessary to resist a regular force. . . . The firmness requisite for the real business of fighting is only to be attained by a constant course of discipline and training."

It is manifestly impossible for either officer or man to acquire the essential training of a soldier when his thoughts and energies are concentrated upon important civic and social ambitions and obligations.

If we heed the lessons to be drawn from the military history of our country we are forced to the conclusion that our national defense cannot safely be confided to a small Regular Army backed up by the organized militia as first line troops. In addition to a Regular Army of moderate size the Federal Government must promptly raise, fully equip and maintain a large body of citizen soldiers, trained by it for the requisite period. This force should be drawn from the entire body of our citizenship, which, after all, is the only democratic way to defend a republic.

The ATTACK *in* TRENCH WARFARE

By CAPTAIN G. A. LYNCH
(*United States Infantry*)

[*This article is based largely on two brilliant brochures by Captain André Laffargue of the French Army. These brochures attracted such wide attention that by order of General Joffre they were published as confidential documents for the French Army. They have since been released for general publication. Captain Lynch, recently the editor of the "Infantry Journal," presents a very complete and realistic picture of the attack in trench warfare as practised in Europe to-day.*—THE EDITORS.]

A PRINCIPLE that characterized the military regulations of all European armies prior to the outbreak of the present war was that in military operations the advantage is with the offensive. The defensive attitude was to be adopted only under the pressure of superior numbers or as a temporary measure for the purpose of gaining time with the ultimate view of assuming the offensive.

In general, it may be said that the developments of the present war have justified the soundness of this principle, as all of the great decisive results have been obtained through the prosecution of an offensive of a most pronounced character. In the course of the war, a situation has, however, arisen which does not appear to have been contemplated by the regulations of any of the Powers at war, though its possibility was forecast by a number of military writers; namely, the occupation on a vast scale of positions whose flanks rest upon impassable obstacles or neutral territory, with the resulting substitution of the methods of siege warfare for those of the manœuvre campaign. The results arising from

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this situation have been such that the views heretofore held as to the relative advantages of the two forms of action must be considerably modified in favor of the defensive. In a paragraph comparing the offensive with the defensive, the German Infantry Drill Regulations stated: "On its *front*, infantry on the defensive is very strong when making good use of its firearms, and requires relatively few men as compared to the attack. Its weakness lies on its flanks, unless these are secured by the nature of the ground or by other troops." As the weakness referred to in the paragraph quoted has been removed by resting the flanks on impassable obstacles or neutral territory, the relative advantages of the defense have been enormously increased, for under this situation a defensive position must be approached from its least vulnerable direction, its front. The strength of a defensive position of this character, moreover, increases with the length of time it is occupied, for, as time goes on, the underground shelters are so strengthened and deepened as to be placed beyond reach of the effects of the heaviest artillery, wire entanglements and other obstacles are multiplied, the terrain over which the attack must be made is honeycombed with mines, and innumerable rearward positions are prepared on which an attack, successful in penetrating the more advanced lines, may be shattered.

This situation has given rise to conditions which differ radically from those of manœuvre operations. Since manœuvre operations on the western front were first brought to an abrupt stop by the occupation by the German Army of the positions on the Aisne and Somme rivers, the opposing forces have been brought very close to each other by an advance by sapping, so that at the present time a distance varying from perhaps only fifty to three hundred yards separates the two armies. This close proximity of the two forces eliminates from the attack the phase of the advance from long ranges which is a characteristic of manœuvre operations. Another difference of vast importance is to be found in the practically unlimited ammunition supply of which both forces dispose. Ammunition can be stored in enormous quantities at easily accessible points, while in a manœuvre operation the quantity available is limited by the capacity of the ammunition trains which accompany the troops. Vastly increased ammunition requirements are, moreover, coincidental with its availability, as much more ammunition is required for the purpose of obtaining fire superiority over troops under the elaborate shelters of position warfare than is the case with the hasty fortifications of a shifting manœuvre campaign. An enormous quantity of shells is required for the destruction of wire entanglements and for the creation of barrier fire, which is one of the characteristics of trench warfare. As the enemy cannot be forced out of his position into the open by manœuvre, fire must be relied upon almost exclusively for the protection of the advance. The vast volume of fire which these conditions entail is, in fact, the predominating characteristic of trench warfare as distinguished from the war of movements.

While trench warfare closely resembles the siege operations of other wars, the difficulties of the attack are even greater in the former than in the latter. For the ammunition and supplies of a fortified place sooner or later become exhausted, while in trench warfare the quantity of ammunition is limited only by the resources of the nations at war. Moreover, the num-

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ber of positions on which the defense of a fortified place may be made is necessarily limited; a penetration on a front of any considerable breadth is generally conclusive of the fate of the fortress. On the other hand, there is practically no limit in trench warfare to the number of rearward positions on which a stand may be made or from which a counter-attack can be delivered under favorable conditions against the enemy forces that have succeeded in penetrating the more advanced lines. These facts explain the apparent paradox that, in a war which is remarkable by reason of its demonstration of the worthlessness of permanent fortifications, the greater part of the military operations have been characterized by the employment of methods of siege warfare.

The enormous advantage which the defensive enjoys under these conditions imposes extraordinary measures on an offensive that would count upon any measure of success. In general, the conditions of a successful attack may be said to be: first, an overwhelming superiority of artillery fire; and second, the concentration of a large force of infantry which will be launched in innumerable waves against the sector selected for the attack and which will be subjected to stupendous losses for the sake of the attainment of final success. In other words, the offensive must concentrate an enormous quantity of artillery and be resolved to accept the losses which are the price of victory.

Many of the details of the method by which assaults have been carried out are not yet available and will probably not be known until the end of the war when the participants are more at liberty to describe the results of their own observations and experiences. A very complete statement of the general problem has, however, been made by Captain André Laffargue of the French Army in two brochures entitled, "Study on the Attack in the Present Period of the War" and "Advice to Infantry Soldiers." These studies were so highly thought of that General Joffre caused them to be published to the French Army as confidential documents. They have since been released for general publication. In the present article, an attempt will be made to restate with some rearrangement the more salient features of the attack as described by Captain Laffargue.

The problem of the attack as stated by Captain Laffargue involves the assault of fortifications which in general consist of two main positions separated by distances varying perhaps from 2,000 to 5,000 yards. The first position consists of two or three continuous lines of trenches separated by distances of from 100 to 300 yards and connected by numerous communicating trenches. Wire entanglements protect the front of each line of trenches. At intervals of 800 to 1,500 yards along the front of the first position, centres of resistance (strong points) consisting of fortified villages, woods, or a network of trenches ("labyrinths") are constituted. The object of these centres of resistance is to bring a flanking fire to bear upon the intervening intervals. The intervals between centres of resistance are usually guarded by redoubts located somewhat farther to the rear.

The second line of defense is not generally continuous, as intervals must be left for the passage of troops advancing to the attack or moving forward to reinforce the first line.

The objectives which must be dealt with in the attack are therefore the trenches of the first position, the centres of resistance, and the trenches of the second position. The defense

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of each of these objectives includes artillery, rifles, grenades, and machine guns.

The first phase of the attack is the artillery preparation. As this article is concerned mainly with the action of the infantry in the attack, the discussion of this phase will be limited to a statement of what the artillery is expected to accomplish in order to make possible the launching of an assault with prospects of success.

In order to attack with minimum losses, the infantry requires, first of all, that the artillery shall have destroyed the wire entanglements that obstruct the advance on the enemy trenches or have sufficiently breached them to permit them to be crossed. The destruction of the wire entanglements is generally by no means complete, as complete destruction would require too great an expenditure of ammunition. The infantry holding the hostile trenches must also be so overwhelmed with artillery fire that they will be incapable of manning them when the assault is launched. During the artillery preparation, the hostile infantry does not occupy its firing position in the trenches, but remains in deep underground shelters which are often beyond the reach of the effects of all but the heaviest shells.

Only a few observers occupy especially protected observation posts along the front line of trenches, and when the bombardment ceases the infantry leaves the shelters and mans its firing positions. To prevent the infantry from issuing from these shelters at the moment of the assault is one of the most difficult and important tasks of the artillery preparation. The shelters are as a rule so deep that often they cannot be broken in, but the bombardment of trenches caves in the exits and may thus prevent egress of the occupants. The large shells of the trench mortars are especially effective for this purpose. The enemy can sometimes be tricked into leaving his shelters prematurely by causing the artillery to cease firing and opening a violent rifle fire. This causes the enemy to believe that the assault has commenced, and he mans his trenches to meet it. After waiting several minutes, the bombardment is resumed, inflicting heavy losses on the defenders of the trenches. The hostile infantry may also be forced out of the shelters by the use of shells and grenades containing materials giving off heavy suffocating gases, which penetrate the shelters, making them untenable.

The infantry of the attack also requires of its own artillery that the hostile artillery be put out of action before the assault. If the enemy artillery gets into action, the infantry of the attack, crowded into trenches and parallels awaiting the movement of the assault, is subjected to a heavy bombardment, which causes losses and obliges the infantry to hunt for cover and thus greatly impedes its getting into action. To put the hostile artillery out of action, detailed information by aërial reconnaissance as to the location of hostile batteries must have been acquired.

It is also necessary that the artillery prevent hostile reserves and reinforcements from getting into action. As has already been stated, the first position consists of two or three lines of trenches separated by distances of from 100 to 300 yards. The reserves of the first line of trenches are located in the second and third lines of trenches of the first position. As long as the artillery preparation continues, the reserves remain in the underground shelters, but as soon as the bombardment ceases they man the trenches. The artillery must therefore extend

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its fire to the second and third lines and continue this fire while the infantry rushes the first line. The communicating trenches which connect the different lines of firing trenches must be especially swept to prevent the approach of reinforcements and protect the advancing infantry from flanking fire which might be delivered from them. After the infantry has passed the trenches of the first position, the artillery lifts its fire to the second line of defense. The artillery preparation on this line is similar to that on the first position, though by reason of the greater range and the impossibility of making as complete a reconnaissance of the details of the position it cannot be so complete.

Beyond the second position, the defender holds, in cantonments, large reserve forces ready to be sent forward to any point where a need for reinforcements may develop. It is necessary to the success of the infantry assault that the arrival of these reinforcements be prevented. This is effected by establishing a barrier of continuous artillery fire beyond the trenches of the second position.

The weapon which inflicts the heaviest losses on infantry is the machine gun, which uncovers itself suddenly and in a few seconds lays out the assailant by ranks. It is therefore absolutely necessary to effect as complete a destruction of the hostile machine guns as possible before launching the assault. During the days that precede the attack, a minute study of the hostile trenches is made with a view to locating the emplacements of the enemy's machine guns. In the course of the artillery preparation, these emplacements must be overwhelmed with a deluge of shells. On account of the small space required for machine-gun emplacements, all the machine guns of the defense are seldom put out of action.

So much for what concerns the preparation for the assault. The organization of the infantry for the assault itself is the next step for consideration.

We have seen that, on the front to be assaulted, the defensive works consist of two main positions and that the first position consists of two or three lines of trenches separated by 100 to 300 yards and of centres of resistance (strong points) at intervals of from 800 to 1,500 yards. The organization of the assaulting infantry corresponds in a general way to these features of the position to be attacked. A first line of attack is constituted whose general mission is the assault and capture of the trenches of the first position, and a second line of attack for the assault of the second line of defense. The separate organization of these two lines is necessary for the reason that the first line of attack becomes so disorganized in the fighting connected with the capture of the trenches of the first position that it no longer possesses sufficient cohesion to carry through the assault of the second line of defense. It is necessary to launch an intact and unengaged force for that purpose, and the mission of carrying the second position is therefore assigned to a distinctly organized second line.

As the first position consists of several lines of trenches, the first line of attack is launched in two or more waves. The rearward waves are in the nature of reinforcements. As they see what is happening to the first wave, they are enabled to move forward by the least dangerous routes and enter the first hostile trench at the points where resistance has most weakened. Each unit of the first line of attack is assigned to a distinct objective. Certain units are given the mission of en-

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circling the centres of resistance by occupying their borders; they thus prevent the garrisons of these centres from enfilading the units which advance through the intervals between the centres. In the assault, the main effort is made in the intervals between the centres of resistance; no attempt is made to storm these centres, as to do so would involve the sacrifice of a large number of men without compensating advantages. The effort against them is limited to an attempt to neutralize them by the capture of their borders and thus deprive them of power to check the advance through the intervals. If this can be done and the attack through the intervals is successful, the centres of resistance will fall of themselves.

Preparatory to the assault, numerous saps (trenches) are run out to the front from the main firing trenches. The night before the attack, a parallel is broken out connecting the sap heads. This parallel is amply supplied with short ladders and is occupied by the companies composing the first wave of the attack. The saps and the main trenches are also filled with men assigned to the following waves who will move into the parallel as soon as the first wave leaves it. As the artillery preparation ceases, the first waves rush up the ladders in succession and move out to the assault.

In addition to the first and second lines of attack, a reserve is constituted at the disposition of division commanders, which is not given an initial assignment but which will be employed, in accordance with the situation which develops, either to conquer any resistance which the first and second lines have been unable to reduce, or to reinforce any point where reinforcements may be required. For the purpose of exploiting the success attained by the assaulting troops and engaging in the manœuvre operations which will follow a successful penetration of the enemy's defenses, units of a high degree of mobility, infantry in automobiles, cavalry, auto-cannon, and auto-machine guns, are held in readiness. Farther to the rear, ready to be launched into action at any point along the front chosen for attack when the assault may prove successful, large units are held as a general reserve.

The foregoing statement outlines in a general way the measures relative to the organization of the troops for the assault. Before entering into a more detailed description of the execution, by each line of attack, of its rôle in the assault, it will perhaps be to the interest of a clear conception of the action of each line to give a general view of the action as a whole as it may be expected to develop.

As the artillery preparation ceases, the infantry of the first wave of attack leaves its parallel, where it has been waiting in a position of readiness, and moves out at a walk, maintaining an accurate alignment. Rifle and machine-gun fire from parts of the hostile trenches is opened on it. The wave of assailants is thinned out, entire units disappearing in the furnace of fire. Some lie down and cease to advance while others better commanded, or favored by a more effective artillery preparation, reach the first trenches, where hand-to-hand fighting with rifles, bayonets, and grenades begins.

The second wave of the first line of attack leaves the parallel in its turn, avoids the zone of destruction, and plunges into the parts of the hostile trench where resistance has weakened. Together with the first wave it captures or destroys the defenders of these parts of the trenches and, moving to the right and left, completes the conquest of the first trench. The

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first line then forms beyond the first hostile trench and starts forward again. The second trench is assaulted, and certain parts are conquered through which the flood of assailants spreads out and completes the conquest of the second trench.

The first line of attack has suffered heavy losses and has become badly disorganized by these assaults. Some groups, however, make their way farther into the hostile territory, but on account of their weakness are soon stopped. Behind them, the combat of extermination continues in places, and grenadier patrols fight their way forward through the communicating trenches.

In front of the centres of resistance, the fight is hard and murderous; some of the exterior trenches or houses have been taken, but the progress has been inappreciable in spite of enormous losses. Organizations are dissolved into groups advancing through innumerable communicating trenches; the character of the fighting is that of individual combat with rifles, bayonets, and grenades.

This is the limit of the results to be expected from the first line. In the centres of resistance, it has scarcely secured a hold on the exterior borders; in the intervals between these centres, it has expanded widely like a wave which has broken through a dike at one point. But it has been stopped in front of the second line of defense or it has been checked by flanking fire from the still unconquered centres of resistance. The most advanced groups can only be relied upon to hold the ground which has been conquered. The greater part of the first line of attack is scattered over the whole zone of the attack. The action of the first line has taken perhaps an hour.

In the meantime, hostile reinforcements have come up at some points and have manned the positions of the second line. Machine guns are installed and open fire to prevent access to the undefended zones and to gain time. The second line is now launched into action; starting out in its turn from the parallel, it advances by immense and successive waves of thin lines. Batteries of field artillery called "accompanying batteries" follow it and are oriented on their targets by reconnaissance officers of artillery who follow the infantry. The remainder of the artillery directs its fire on the second line of defense and cuts off the approaches to it by a barrier of asphyxiating shells.

Under the cover of this fire, the second line arrives near the advanced groups of the first line. As it has not been subjected to the disorganizing combats which have dissolved the first line, the different units composing it can be directed on well defined objectives. Certain units of the second line are assigned the mission of blinding the centres of resistance by finishing up the conquest of their exterior borders, but the greater part advance through the intervals against the second line of defense, which is generally not continuously occupied. Some of the units encounter powerful resistance, while others are able to penetrate the hostile line. Those which are held up rapidly organize an assault, and the second line of hostile defense is soon split up into islands which are surrounded on all sides.

The action of the two lines of attack may be expected to overwhelm the greater part of the two main hostile positions. At certain points, however, the resistance will hold out, which, if not overcome, will constitute points of support to which the enemy may bring up reinforcements and even turn the tide of battle by a counter-attack. To deal with these unconquered points

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as well as with hostile reinforcements which may arrive, the reserve is launched into action. Information as to the points where resistance is holding out or hostile reinforcements are arriving is conveyed to the superior commander by reconnaissance officers who accompany the attacking lines, and the reserves are moved to the points where they are most needed. They overcome the last resistance which the second line of attack, moving straight to the front, was not able to encircle.

The action of the reserves brings the attack into the open ground beyond the second line of defense, and manœuvre operations then begin. The mobile units are rapidly thrown into action, and large forces from the general reserve are hurried to the point where the lines of defense are broken through.

The description above relates to the general features of the attack. The characteristic which distinguishes the attack in trench warfare is the preconceived plan, which would be utterly unsuitable to the shifting nature of mobile operations, but which is absolutely indispensable to success in siege warfare.

There remains to be considered more in detail the action of the several fractions into which the attacking forces are distributed.

The first line as before stated is composed of two or three waves. These waves each consist of entire companies in line, men at half-pace intervals. For example, a regiment might be formed in two lines of six companies each. The formation differs somewhat with the distance to be crossed in reaching the hostile trench. When the distance is less than 100 yards, it is expected that the first wave will, if the artillery preparation has been sufficient, be able to reach the hostile trench without firing, except perhaps at the last moment as it reaches the wire entanglements and the enemy opens fire. If the distance is much greater than 100 yards, it is necessary to provide for the protection of the advance by rifle fire. This protection is afforded by a line of skirmishers, deployed at five-pace intervals, which moves out from the companies of the first wave and precedes them by about 50 yards. In this case, the distance to be covered by the first wave is too great for the attacker to hope that he can, by a sudden rush after the cessation of artillery fire, reach the hostile position without opening fire. The thin line of skirmishers is designed to give the necessary fire protection and at the same time permit the first wave to retain its elbow-to-elbow formation, which it could not do if it were compelled to open fire. The skirmishers are selected from among the especially good shots. Each skirmisher marches upon a particular point of the hostile trench and watches it closely. The skirmishers open fire upon the order of the company commander, who marches between the skirmishers and the rest of the first wave.

Each echelon starts out at a walk, carefully aligned, and afterward takes up the double time at slow cadence in order to maintain cohesion. Several rushes of from 80 to 100 yards are made, until the wire entanglements are reached.

From this movement, the period of charge and individual combat begins. The men can no longer be kept from firing; each man tries to protect himself with his rifle. The wire entanglements have not generally been completely destroyed by the artillery fire; the artillery generally contents itself with making holes in them. Each man should locate the hole through which he should pass. The line reforms

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beyond the wire entanglement, and at 60 yards from the hostile trench the charge takes place. In one movement, the bayonets are brought to the charge, and the men rush upon the enemy. Each man runs straight toward the part of the trench in front of him; he watches the loop-holes and the parapet; if a head or a rifle shows itself, he fires to make them disappear and then jumps upon the parapet. By rifle shots and bayonet thrusts, he destroys everything in his way. Men chosen in advance take charge of the prisoners.

The first trench taken and all its defenders disposed of, the line is reformed lying down ten yards beyond it. As each man arrives on the line, he opens fire on the defenders of the second trench (from 100 to 300 yards farther to the front). When the line has been completely reformed, the men start off for the assault of the second trench.

The second wave of the first line of attack starts forward at the moment the first wave reaches the hostile trenches. If it starts sooner, it will unite with the first at the entanglement and become involved in the fight for the first trench; it will be broken up prematurely, and will be unable to take advantage in its advance of the developments of the fight of the first wave. While the first wave drives straight ahead and can do nothing against the surprises of the enemy, the second wave, warned by what is happening to the first, can direct its advance on those parts of the hostile trench where resistance has most weakened.

The immediate action of the first line (two or more waves) rarely results in the immediate occupation of the whole of the enemy line of trenches. Uncaptured gaps will generally be found along the whole front of the first trench. As traverses are located along the trench at intervals of from 10 to 20 yards, primarily for protection against enfilade fire and to localize the effects of shell-burst, fire cannot be opened on the hostile infantry occupying these gaps. In the narrow trench, only a few men can proceed against sections of the trench included between traverses. To deal with sections of this character (called "bays"), which cannot be reached by rifle fire, grenadier parties accompany the first line of attack. For the purpose of carrying out this duty, grenadiers are organized into parties consisting of a leading group, a supply chain (carriers) and a group which fills up sand bags (barricaders). The leading group consists of a fusilier, armed with a rifle or revolver, and two grenadiers (throwers). The fusilier moves along the trench in advance of the throwers; his sole duty is to bar the passage to the enemy and protect the grenadiers. The throwers deliver a volley of grenades into the section of the trench to be assaulted; the fusilier slips forward through the smoke and moves around the corner of the traverse and signals to his comrades. In this way, progress is made from traverse to traverse. The supply chain is formed by a few men (carriers) separated by intervals of several paces so as to be able to get out of the way of enemy grenades without interfering with each other. They pass along haversacks or sacks filled with grenades. The third group (barricaders) is engaged in filling sandbags so that a barricade can be constructed in case of counter-attack or when the advance of the party is stopped for any reason. The barricaders also fire rifle grenades to impede the supply of the enemy or to block his path of retreat.

Grenadier parties also find employment in clearing out the communicat-

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ing trenches connecting the different lines of firing trenches. These communicating trenches are not straight but are zigzag in plan so as to defilade the passage from fire coming directly from the front. The different sections of the zigzags are dealt with in the same way as the bays of the firing trenches. The defenders of the communicating trenches frequently construct barricades to stop the advance and for their own protection. These barricades are blown up with bomb charges. In moving through the communicating trenches, progress is made from turn to turn of the zigzag course in the same manner as in clearing out the bays of the firing trenches. Island traverses, i.e., traverses where the trench divides into two branches and is united on the other side of the traverse, are also often encountered in the communicating trenches. In this case, both branches of the trench must be cleared out and reconnoitered before resuming the advance.

The reinforcement by the second wave and the disorganization produced by the assault lead to a mixture of units in the trenches of the first position. Before starting out to the assault of the next trench, it is necessary that the organization of the companies be restored. The men rally around the officers and noncommissioned officers of their own companies when reforming beyond the captured trench. Designated patrols creep rapidly forward; they cover the rally and the march of the first line and endeavor without exposing themselves to reach the important parts (junctions of communicating trenches, etc.), the occupation of which will prevent the arrival of reinforcements and cut off the retreat of certain groups of defenders.

After the capture of the trenches of the first position, the first line of attack presses forward as far as possible into the open zone between the first and second positions (from 2,000 to 5,000 yards deep). The men will now come under the enemy's artillery, rifle, and machine-gun fire and will no longer be protected to the same degree by the fire of their own artillery as was the case in the assault of the first trenches. They will have to rely upon the protection of their own fire and the accidents of the ground.

The big shell, in spite of its powerful moral effect, is really dangerous only when it falls on the exact place where a man is standing, as all the splinters rise in the air. The soldier should lie down flat when the shell bursts and should not get up immediately after the explosion, especially if he is from 200 to 300 meters from the place where the burst took place, because the splinters do not fall until a long time after the explosion. The steel helmet and the knapsack with the folded blankets afford fairly effective protection against splinters and shrapnel balls to a man lying in the prone position.

Every effort should be made to get beyond the shelled area as rapidly as possible. Some men become terrified and remain in the prone position as if unable to move. They are almost certain to be destroyed. A target that remains stationary is an easy prey for artillery fire. The assaulting line should attempt to reach a point near the hostile infantry where the enemy artillery will have to cease firing for fear of inflicting casualties on its own troops. Endeavor should be made by all possible means to prevent disorder in the ranks under artillery fire, for a disorganized line is powerless and is certain to be destroyed.

Upon reaching a firing position, the soldier's first concern is to create a shelter if one does not exist naturally.

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To fire well he must be sheltered. A soldier who risks getting shot at any moment is nervous and his fire without effect. The shelter consists of a mound of earth, as inconspicuous in appearance as possible, and a loop-hole. In order that he may be protected from the front, the loop-hole does not point directly to the front, but is slanting. After having completed his shelter, the soldier's next task is to find the aiming point of his rifle. To do this, he aims at some conspicuous point where the strike of the bullet can be observed, which he judges to be at the same distance as his objective. He thus determines how much above or below his target he must aim in order to hit it. He is then in a position to open fire on any enemy who may show himself in the hostile trench.

While the companies of the first line push forward as far as possible, they cannot in the general case be relied upon to carry the second line of defense but will generally be stopped at some position in the zone between the two hostile positions where they will have prepared a line of shelters. To reach this line of shelters, from which it will carry forward the assault to the second line of defense, is the first objective of the second line of attack.

During the preparation of the assault the troops of the second line await their turn in the shelters of their own positions. When the first line has entirely departed, the companies of the second line take their place in the parallel of departure from which the first line was launched. Each unit is given a definite objective on which to march and takes up the formation in which its advance will be made, before leaving the parallel. This formation differs materially from that taken up by the first line when it left the parallel. For the second line has to meet an entirely different situation. It was necessary for the first line to take up a formation adapted to the delivery of the assault, and, as we have seen, it advanced in close order, in elbow-to-elbow formation. The second line, on the other hand, is not at first concerned with the delivery of an assault nor with opening fire on the hostile position. Its first task is to reach the position outlined by the most advanced elements of the first line. The consideration which determines its formation is solely protection from losses from hostile fire. It therefore advances in a succession of thin lines. Each company moves forward in two lines, about 150 yards apart, the skirmishers of each line deployed at intervals of about three or four yards, the company commander marching between the two lines. In this formation, the two lines avoid being included in the area of burst of one shell and present the least vulnerable target to rifle fire.

The troops of the second line arrive in the proximity of the position of the stopped first line, which, if sufficiently near to the hostile position, will serve as a parallel of departure for the assault of the second line of defense. As in the case of the assault of the trenches of the first position, the second line assaults the trenches of the second position in two or more waves. Before moving out to the assault, fire is opened on the hostile position either by selected shots or by the entire line. In addition, an attempt may be made to get a small group to the front or on the flank, which will protect the movement by their fire. The first wave rushes out of cover in double time to at least half the distance to the hostile position and opens fire. Fire being opened, the second wave rushes in line and carries along the first. The opening of rifle

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fire is here necessary because the second line cannot, as in the case of the assault of the first position, count upon the support of the artillery, but must rely on the protection of its own rifles.

In case the distance from the halted first line to the hostile position is greater than 200 yards, an assaulting line must be built up nearer to the hostile position and a rough parallel of departure created at assaulting distance from the enemy. To reach this position, the advance from the halted first line is resumed in thin lines formed by halving the lines in which the advance to the position of the first line was effected. These lines, at least 100 yards apart, advance successively by alternate rushes, and then unite on the line designated as the starting point for the assault. In case no natural line of cover exists at assaulting distance, one must be constructed. For this purpose, sandbags, which the men carry with them as part of their equipment, are filled with earth at the last shelter, and some stones are put in, which are not bulky and stop bullets. Each man makes his rushes with his sandbag, which protects him during the halts. Having reached the line fixed upon as the parallel from which the assault will be delivered, the sandbag serves him as a cover, which he has only to complete rapidly. Each man then enlarges his shelter so as to make room for comrades arriving later.

Before starting a rush, the rifleman should definitely fix the place where he is going to take up his next position. Care should be taken not to arouse the attention of the enemy to the fact that a rush is about to begin, by raising the rifle or arising slowly.

It is sometimes possible to reach a new position without having to cross the open ground. If a covered line of approach to a more advanced position exists, the men can creep along it one by one to the new line; the men last to leave the position continue the fire during the advance of their comrades. To advance in this way, the line of approach must be completely under cover, or, if it is not continuous, it must be completed by digging at the uncovered parts.

The first wave of the second line of attack is reformed at assaulting distance and delivers the assault as already described in the capture of the first trenches. The second wave follows and completes the assault, as in the case of the first position.

Machine guns accompany the last waves of the first line of attack, and are therefore not directly taken under fire. They can thus profit by the indications of the fight of the first line and are able to act effectively when the second line comes into action. They are employed to man the positions taken or to support the infantry elements at a distance. Some machine guns also attempt to creep forward as far as possible in front of the halted line, so as to be able to support the infantry advance by their fire.

We have seen that the hand grenade is an important weapon in the combats which take place in the communicating trenches. Grenades are also useful auxiliaries in the direct assault of a trench, especially when, as in the assault of the second line of defense, the artillery preparation cannot be effectively carried out. Sometimes, in the course of the combat, a group succeeds in locating itself quite close to the enemy trench. An unprepared assault under these conditions would be extremely dangerous. An attempt is therefore made to overwhelm the enemy with grenades and then attack with the bayonet. A few riflemen, supplied with grenades, try to get

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within throwing range of the enemy by making use of all the accidents of the ground, shell holes, or trenches abandoned by the enemy; if necessary, they complete their line of approach with the help of intrenching tools. The rest of the group await the moment of the assault under shelter. The grenadiers overwhelm the enemy with a continuous hail of grenades and compel him either to evacuate his position or take refuge in his shelters. The assaulting group then loads and fixes bayonets; at a given signal, all the men rise together. They rush forward without shouting, reach the defenders, who are taken by surprise, and destroy them with rifle fire or the bayonet before they have a chance to defend themselves.

In a general way, this article has endeavored to set forth the character of the attack in trench warfare as described by Captain Laffargue. For the sake of continuity of the narrative and in order to present a more or less coherent picture of the operation, the material contained in Captain Laffargue's studies has been subjected to considerable rearrangement, and certain episodes which he describes without relation to the general course of the action have been given a setting within which he does not confine them. It must be remembered that many of these situations may occur not only in the setting assigned to them in this description, but also in any part of the course of the attack.

It will be noted that a characteristic of the attack in trench warfare is the elaborate prearrangement of all the details of its execution. This necessitates a special training of the different elements of the attack of the most thorough conceivable nature. When it is considered that the training required for this special situation is additional to that required for manœuvre operations, some idea can be formed of the scope of instruction and disciplinary education required to produce a soldier capable of coping with the conditions of modern war.

To the date of writing, no attack of this nature on the western front has succeeded in attaining its ultimate object, that is, to create so wide and deep a breach in the enemy's defenses as to force a general withdrawal along his entire line and therewith the transformation of trench warfare into manœuvre operations in the open field. Many believe that it is impossible to do so. They hold that even if the attack should succeed in penetrating to a considerable depth, the position of the most advanced elements becomes constantly more isolated and endangered with the progress of the advance, and that a time must come when their weakness will become so great that they are sure to be repulsed and driven back by the superior enemy forces that will be concentrated against them. Moreover, an attack of this nature is necessarily lacking in the element of surprise which has always been one of the conditions of any great military success; the prospective attack cannot avoid being advertised to the enemy's air scouts by the immense concentration of guns and ammunition that takes place for some time prior to the launching of the attack. Nevertheless, successful penetrations have been effected on numerous occasions on the eastern front, where entrenched positions have been not much less elaborate than on the western front. The most notable success of this nature was the penetration of the Russian positions on the Donajec in the spring of 1915 by Field Marshal Mackensen, which was followed by the great Russian retreat to the approximate line of its present positions.

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Certain conditions on the eastern front, it is true, have rendered the problem of relatively easy execution; among these, one of the most important is the less favorable railroad communications which make it more difficult for the defender to bring up reinforcements to the point of attack. But perhaps the most important difference is to be found in the quality of the troops engaged; there can be little doubt that the deadlock on the western front is to no small extent due to the fact that the forces there in contact along the greater part of the front are the two best disciplined and trained armies of the world.

But whatever opinion one may have regarding the feasibility of a complete penetration and disruption of the lines of defense, the attack is an essential phase of trench warfare. Two armies will never be content simply to remain in contact and limit their operations to bombardment and bombing of the opponent's position. For no matter how large the caliber of the guns employed may be, it will always be possible to dig shelters sufficiently deep to be beyond reach of the effects of their projectiles. To obtain results of any importance, the enemy must be forced into the open, and this can be accomplished only through an advance. The object of such an advance may be limited to simple raids similar to the sorties of garrisons of fortified places in former wars; or it may, after months of tireless watching and the discovery of a weakness in the enemy's lines, take on the colossal proportions of the assault on the Donajec, followed by an immense débâcle. Whatever may be its objective, the attack is an essential feature of trench warfare, and the methods of attack deserve careful study and practice. It should not, however, be forgotten that training for manœuvre operations is the primary concern of an army, for unless it is able to engage in the manœuvre battle with good chances for success, it will be overwhelmed in an action in open field. It is more than likely that an army trained only in the methods of trench warfare will never have the opportunity of applying them.

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THE RECRUITMENT PROBLEM

An Analysis of the Adjutant General's Report

THE annual report of Adjutant General McCain contains a mass of information as to the paper and real strength of the Regular Army, which is of peculiar interest at this time, when the country is called upon to choose between an attempted expansion of the system of a paid soldiery and the alternative of trained citizen forces recruited on the theory that military service is due as an obligation of citizenship. Much misconception has resulted from the confusion between "authorized" and "actual" strength, and even the best informed of the public press have on this account often departed from realities. It is of prime importance in any discussion of permanent policy to ascertain exactly what has recently been accomplished and may reasonably be expected from attempts to rely on a professional army as a fighting force and main safeguard for land defense. The official figures of General McCain's report dispel the haze of uncertainty that has surrounded the subject in the public mind.

As to the *authorized* strength of the Army on June 30, 1916, the table below (Table I) is presented.

The more interesting information

TABLE I

BRANCHES OF SERVICE	OFFICERS	ENLISTED MEN	TOTAL
General officers	24	.....	24
General Staff Corps	34	.....	34
Adjutant General's Department	23	.....	23
Inspector General's Department	17	.....	17
Judge Advocate General's Department	13	.....	13
Quartermaster Corps	256	6,403	6,659
Medical Department	[1]660	[2]5,388	6,048
Corps of Engineers	248	1,982	2,230
Ordnance Department	85	1,115	1,200
Signal Corps	106	1,472	1,578
Bureau of Insular Affairs	3	.....	3
Professors, United States Military Academy	7	.....	7
Chaplains	67	.....	67
Cavalry	810	17,594	18,404
Field Artillery	262	6,358	6,620
Coast Artillery Corps	747	19,321	20,068
Infantry	1,606	54,443	56,049
Porto Rico Regiment of Infantry	50	599	649
United States Military Academy detachments	.....	632	632
Recruiting parties, recruit depots, and unassigned recruits	.....	6,098	6,098
United States Disciplinary Barracks guards	.....	350	350
Service school detachments	.....	746	746
With disciplinary organizations	.....	110	110
Mounted orderlies	.....	7	7
Indian scouts	.....	75	75
Total Regular Army	5,018	122,693	127,711
Philippine Scouts	182	5,733	5,915
Aggregate	5,200	128,426	133,626

[1]Includes 155 officers of the Medical Reserve Corps assigned to active duty under the provisionsof the Act of Congress approved April 23, 1908 (35 Stat. L., 66).

[2]The act of June 3, 1916, provides that the enlisted strength of the Medical Department is not to be counted as a part of the enlisted strength of the Army, which is similar to the provision contained in the Act of March 1, 1887 (24 Stat. L., 435).

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as to the *actual* strength of the Army on June 30, 1916, is presented in Table II. The distribution of these troops was as shown in Table III.

The comparison between *actual* and *authorized* strength at the end of the fiscal years 1915 and 1916 is shown in Table IV.

TABLE—II.

BRANCHES OF SERVICE	OFFICERS	ENLISTED MEN	TOTAL
General officers	24	.....	24
Staff corps and departments	1,206	12,374	13,580
Engineers	228	1,826	2,054
Cavalry	782	15,160	15,942
Field Artillery	257	5,627	5,884
Coast Artillery Corps	739	18,273	19,012
Infantry	1,607	34,313	35,920
Miscellaneous	.....	9,440	9,440
Total Regular Army	4,843	97,013	101,856
Philippine Scouts	182	5,603	5,785
Aggregate	5,025	102,616	107,611

TABLE—III.

GEOGRAPHICAL DISTRIBUTION	OFFICERS	ENLISTED MEN	TOTAL
In the United States[1]	3,622	67,416	71,038
In Alaska	23	769	792
In the Philippine Islands:			
Regular Army	480	11,404	11,884
Philippine Scouts	182	5,603	5,785
In China	41	1,233	1,274
In Porto Rico	35	679	714
In Hawaii	333	8,112	8,445
In the Isthmian Canal Zone	253	6,846	7,099
Troops en route and officers at foreign stations	56	554	610
Total	[2]5,025	[3]102,616	107,641

[1] Includes troops serving in Mexico, it being deemed inadvisable at this time to give the exact number of troops serving in that country.
[2] Includes 154 first lieutenants of the Medical Reserve Corps.
[3] Includes 4,670 enlisted men of the Medical Department.

TABLE—IV.

	REGULAR ARMY			PHILIPPINE SCOUTS			TOTAL		
	OFFICERS	ENLISTED MEN	TOTAL	OFFICERS	ENLISTED MEN	TOTAL	OFFICERS	ENLISTED MEN	TOTAL
Authorized strength:									
June 30, 1916	5,018	122,693	127,711	182	5,733	5,915	5,200	128,426	133,626
June 30, 1915	4,834	97,248	102,082	182	5,733	5,915	5,016	102,981	107,997
Increase during year	184	25,445	25,629	.....	.....	.....	184	25,445	25,629
Actual strength:									
June 30, 1916	4,843	97,013	101,856	182	5,603	5,785	5,025	102,616	107,641
June 30, 1915	4,616	95,765	100,381	182	5,430	5,612	4,798	101,195	105,993
Increase during year	227	1,248	1,475	.....	173	173	227	1,421	1,648
Vacancies:									
June 30, 1916	175	25,680	25,855	.....	130	130	175	25,810	25,985
June 30, 1915	218	1,483	1,701	.....	303	303	218	1,786	2,004

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In considering the discrepancy of 25,985 between paper and actual strength on June 30, 1916, it must be kept in mind that this takes no account of the added authorizations under the National Defense Act of June, 1916. The current conflicting statements as to the authorized strength under the new Act are explained in General McCain's report under the heading "Increase of the Army." After noting that the Defense Act "provides for a material increase in both the commissioned and enlisted strength of the Regular Army," he says:

"The increase in the numbers of officers and enlisted men authorized by the Act of June 3, 1916, is to be made in five annual increments with the provision 'that in the event of actual or threatened war or similar emergency in which the public safety demands it, the President is authorized to immediately organize the entire increase authorized by this Act, or so much thereof as he shall deem necessary.'

"Under the provisions of the Act cited, the authorized enlisted strength for the fiscal year 1917, which includes the first increment, is as follows:

TABLE V

Infantry	51,224
Cavalry	17,357
Field Artillery	7,881
Engineers	2,198
Coast Artillery Corps	21,423
Quartermaster Corps	8,000
Signal Corps	3,369
Ordnance Department	1,241
Medical Department	6,614
Service School Detachments	752
Military Academy Detachments	684
United States Disciplinary Barracks guards	468
Disciplinary Organizations	101
Mounted Orderlies	29
Sergeants on Duty with National Guard	209
Indian Scouts	75
Recruiting Parties and Unassigned recruits	11,539
Total Regular Army	133,164
Philippine Scouts	5,733
Aggregate	138,897

"In time of peace the total authorized strength of the line of the Army is limited to 175,000. Under that limitation the total enlisted strength will be 175,000 (including Ordnance Department) and approximately 42,750 for the staff corps and departments and miscellaneous organizations, making a total of approximately 217,750 for the Regular Army, or an aggregate strength of approximately 223,580 if the enlisted strength (5,733) of the Philippine Scouts is included. Approximate figures are given, because the strength of some of the staff corps and departments is not fixed by the act, but will be fixed by the President from time to time in accordance with the needs of the service. The total enlisted strength of the Medical Department, limited to 5 per cent. of the total enlisted strength of the rest of the Army, cannot be determined at this time, because the strength of all the other staff corps and departments is not fixed.

"The total number of officers authorized by the Act in time of peace is approximately 11,450, including the 182 officers of the Philippine Scouts, while the maximum number of officers authorized would be about 580 more, all the additions being in the Medical Department. The exact number of officers authorized cannot be stated, because the number of additional officers varies from time to time, and

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because the number of retired officers that will be transferred to the active list under the provisions of the Act of March 4, 1915, cannot be foretold.

"The total maximum enlisted strength (war strength) of the Army, including the Philippine Scouts, is nearly 298,000. This figure is approximate and is based on increases in the staff corps and departments in proportion to the increases authorized for the first increment.

"The total number of officers authorized for the fiscal year 1917 is 7,252, including 182 officers of the Philippine Scouts."

The net result appears to be, therefore, that the Army is intended to be increased before June 30, 1917, from its actual strength on June 30, 1916, by 38,508, that is to say from 107,641 officers and men to 146,149 officers and men.

The important point to determine is whether this increase and the yet greater increases "authorized" by the four later increments are matters of practical possibility. On this point the recruitment figures and the figures of normal annual losses in Army strength are most enlightening, the latter no less so than the former, since it is impossible to comprehend the significance of the gross enlistment figures unless it is known what proportion is necessary to meet the normal vacancies in the service.

General McCain shows that for the year ending June 30, 1916, the number of men leaving active service was 27,597. The losses from all causes during 1915 were 41,537 and 37,514 in 1914. The year 1916 appears, therefore, to have been favorable from the standpoint of losses. The average losses in the three years cited were about 34,000 men per annum. Accordingly the problem of recruitment in the fiscal year ending July 1, 1917, is that of obtaining not less than 70,000 acceptable volunteers, and this may be said roughly to be the minimum quota needed in each of the succeeding four years, in order to bring the Army to authorized peace strength under General McCain's analysis of the Defense Act.

Having this situation in mind the facts and figures cited as to recruiting are very relevant.

The tabular statement of net recruiting results for the three years 1914-1916 is as follows (Table VI):

TABLE—VI

MONTHS	FISCAL YEAR ENDED JUNE 30, 1916			FISCAL YEAR ENDED JUNE 30, 1915			FISCAL YEAR ENDED JUNE 30, 1914		
	ENLISTMENTS	REËNLISTMENTS	TOTAL	ENLISTMENTS	REËNLISTMENTS	TOTAL	ENLISTMENTS	REËNLISTMENTS	TOTAL
July	1,325	820	2,145	2,211	1,318	3,529	1,671	421	2,092
August	1,547	744	2,291	2,664	1,439	4,103	2,005	488	2,493
September	1,582	688	2,270	2,737	1,348	4,085	1,874	567	2,441
October	1,423	688	2,111	3,202	1,353	4,555	2,020	669	2,689
November	1,460	390	1,850	3,329	1,249	4,578	2,454	857	3,311
December	1,441	213	1,654	3,316	1,508	4,824	3,447	1,134	4,581
January	1,488	125	1,613	3,542	1,535	5,077	3,205	1,206	4,411
February	1,104	227	1,331	2,761	1,074	3,835	2,388	1,053	3,441
March	1,961	110	2,071	2,116	1,035	3,151	2,311	1,126	3,437
April	2,483	246	2,729	1,540	797	2,337	2,754	1,037	3,791
May	2,058	109	2,167	1,463	705	2,168	2,484	1,027	3,511
June	3,130	88	3,218	1,461	724	2,185	1,946	1,101	3,047
Total	21,002	4,448	25,450	30,342	14,085	44,427	28,559	10,686	39,245

Average monthly enlistments and reënlistments:

For the fiscal year 1914	3,270
For the fiscal year 1915	3,702
For the fiscal year 1916	2,121

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The unfavorable showing in 1916 was unquestionably due in large measure, as the report points out, to high wages in industry, but the deficiency of recruits was, as heretofore noted, largely offset by losses from the service smaller than the normal. The net result is that it was barely possible to prevent an actual loss in the Army in the fiscal year 1916. Whether Congress had these figures in mind when it increased the Army so radically on paper does not appear from the report.

A feature indicating the difficulty of obtaining physically sound recruits is the table (VII) by recruiting districts, showing the number of men that were rejected:

TABLE—VII

RECRUITING DISTRICTS	NUMBER OF APPLICANTS ACCEPTED	NUMBER OF APPLICANTS REJECTED	TOTAL NUMBER OF APPLICANTS	APPLICANTS ACCEPTED AT STATIONS AND SUBSEQUENTLY REJECTED AT DEPOTS AND DEPOT POSTS
Philadelphia, Pa	837	2,190	3,027	175
Pittsburgh, Pa	353	2,173	2,526	34
Portland, Me	175	576	751	38
Portland, Oreg	353	1,347	1,700	44
Providence, R. I	289	1,250	1,539	48
Richmond, Va	277	488	765	43
Roanoke, Va	186	482	668	17
St. Louis, Mo	1,476	3,865	5,341	211
Salt Lake City, Utah	157	864	1,021	28
San Francisco, Cal	2,937	12,595	15,532	525
Savannah, Ga	532	2,221	2,753	18
Scranton, Pa	261	968	1,229	56
Seattle, Wash	150	404	554	10
Spokane, Wash	201	410	611	26
Syracuse, N. Y	227	1,171	1,398	31
Terra Haute, Ind	398	723	1,121	55
Toledo, Ohio	339	1,163	1,502	31
Wichita, Kans	292	925	1,217	51
Total	30,993	102,097	133,090	4,194

Of the gross number accepted at recruiting stations a considerable percentage was later rejected at depots before final enlistment. With this allowance, the striking fact of interest to the civilian reader is that little more than one applicant in five is found fit for service. This means that to effect the increases to peace strength only as contemplated in the Defense Act about 350,000 men must apply each year for enlistment in the Regular Army. No indication is made in the report as to how any such number of applicants can be found. That the unfortunate results were not entirely due to lack of recruiting activity is shown by the fact that the number of recruiting stations was increased during the year from 84 to 189, and recruiting detachments also largely increased.

As indicating the geographical sections from which the Army is drawn, the table (VIII) on page 59 is of interest.

Summarizing the situation revealed by these statistics, it appears conservative to say that without a radical change in the conditions of service or in the attitude of the public the increase of the Regular Army must, in all probability, remain on paper and in the minds of the uninformed. In short, as judged by past experience, the "actual" strength of the Army is as likely to go backwards as forwards, no matter how many thousands or tens of thousands of men may be "author-

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ized." It seems obvious that increases of pay sufficient to enable the Government to compete in the labor market for the services of our young men in large numbers would be necessarily so large that the consequent costs would be intolerable.

To those of us who question the value of a professional army save for foreign garrisons and purposes of administration and instruction of citizen forces, the figures submitted by the Adjutant General carry no disconcerting message. They mean simply that, within any reasonable limits of cost, no substantial number of Americans can be obtained to constitute a professional standing army. The state of affairs revealed in the dry but telling figures of this report is not an unmixed evil. In so far as it may serve to enforce the lesson that equal military service is due as an incident of citizenship, this condition of affairs is indeed no misfortune at all.

G. C.

TABLE—VIII

RECRUITING DISTRICTS	NUMBER OF APPLICANTS ACCEPTED	NUMBER OF APPLICANTS REJECTED	TOTAL NUMBER OF APPLICANTS	APPLICANTS ACCEPTED AT STATIONS AND SUBSEQUENTLY REJECTED AT DEPOTS AND DEPOT POSTS
Albany, N. Y.	190	807	997	21
Atlanta, Ga.	761	1,520	2,281	55
Baltimore, Md.	329	1,016	1,345	52
Boston, Mass.	322	2,561	2,883	29
Buffalo, N. Y.	467	2,154	2,621	23
Charlotte, N. C.	892	3,119	4,011	123
Chicago, Ill.	3,748	9,702	13,450	442
Cincinnati, Ohio.	550	1,353	1,903	48
Cleveland, Ohio.	709	911	1,620	73
Columbus, Ohio.	231	954	1,185	15
Dallas, Tex.	382	1,089	1,471	79
Davenport, Iowa.	254	1,245	1,499	29
Denver, Colo.	365	2,891	3,256	77
Detroit, Mich.	595	1,698	2,293	71
Evansville, Ind.	345	702	1,047	42
Grand Rapids, Mich.	171	705	876	12
Harrisburg, Pa.	243	440	683	34
Huntington, W. Va.	339	1,573	1,912	38
Indianapolis, Ind.	973	2,260	3,233	120
Joplin, Mo.	410	1,548	1,958	43
Kansas City, Mo.	743	1,086	1,829	61
Knoxville, Tenn.	350	1,829	2,179	30
Lexington, Ky.	398	909	1,307	51
Little Rock, Ark.	306	993	1,299	21
Los Angeles, Cal.	365	1,068	1,433	21
Louisville, Ky.	387	1,459	1,846	56
Memphis, Tenn.	251	1,139	1,390	20
Minneapolis, Minn.	605	1,928	2,533	50
Nashville, Tenn.	308	782	1,090	40
Newark, N. J.	266	1,333	1,599	71
New Haven, Conn.	315	1,224	1,539	47
New Orleans, La.	360	930	1,290	28
New York, N. Y.	3,580	12,299	15,879	681
Oklahoma, Okla.	281	1,290	1,571	36
Omaha, Nebr.	368	1,010	1,378	57
Peoria, Ill.	394	755	1,149	57

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The CHIEF OF STAFF *on the* FAILURE *of the Volunteer System*

(Excerpts from General Scott's Annual Report)

IN COMPLIANCE with instructions of the Secretary of War, the War College Division of the General Staff Corps prepared a Statement of a Proper Military Policy for the United States, which was submitted to the Secretary of War, September, 1915.

The General Staff in this policy report stated the military problem before the country in the following language:

From what has been stated, we are forced to the conclusion that we must be prepared to resist a combined land and sea operation of formidable strength. Our principal coast cities and important harbors have already been protected by harbor defenses, which, by passive method alone, can deny to an enemy the use of these localities as bases for such expeditions.

The enemy being unable to gain a foothold in any of these fortified areas by direct naval attack will therefore be forced to find some suitable place on the coast from which land operations can be conducted both against the important coast cities and the rich commercial centres in the interior. Long stretches of coast line between the fortified places lie open to the enemy. The only reasonable way in which these localities can be defended is by providing a mobile land force of sufficient strength, so located that it may be thrown in at threatened points at the proper time.

It has just been shown what the strength of these expeditions might be, as well as the time required for any one of them to develop its whole effective force. Hence, it can be seen, when we take into consideration the possible two months' delay provided by the Navy, that our system should be able to furnish 500,000 trained and organized mobile troops at the outbreak of the war and to have at least 500,000 more available within 90 days thereafter. Here, however, it must be pointed out that two expeditions alone will provide a force large enough to cope with our 1,000,000 mobile troops, and consequently we must, at the outbreak of hostilities, provide the system to raise and train, in addition, at least 500,000 troops to replace the losses and wastage in personnel incident to war. To provide this organized land force is the military problem before us for solution.

This report was based upon the actual needs of the country, as they existed at that time, leaving to Congress the ways and means to provide the men. The first 500,000 mentioned was to be composed of the Regular Army and its reserve, the reserve to be produced by a term of enlistment of eight years, two with the colors and six with the reserve. The second 500,000 mentioned above was to be composed of citizen soldiers, to be given nine months' military training in time of peace and three months' additional training on or before the outbreak of war before they would be prepared for war service.

The General Staff prepared a plan of organization for the first 500,000, which called for 7 infantry divisions of 9 regiments each, and 2 cavalry divisions of 9 regiments each, with necessary field artillery, engineer and signal troops to complete the divisions. In addition, there was to be provided a total of 263 companies of coast artillery. The total number of units recommended by the General Staff for the active army being:

65 regiments of infantry,
25 regiments of cavalry,
21 regiments of field artillery,

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263 companies of coast artillery,
7 regiments of engineers,
2 mounted battalions of engineers,
11½ signal corps battalions,
8 aëro squadrons,

being an increase in the Regular Army of

34 regiments of infantry,
10 regiments of cavalry,
15 regiments of field artillery,
93 companies of coast artillery,
5 regiments of engineers,
2 battalions of mounted engineers,
169 officers and 2,115 men in the Signal Corps, and necessary increase in the staff corps.

Congress accepted the recommendation of the General Staff in regard to the number of organizations, but at practically two thirds of the strength recommended.

The peace strength of the Regular Army after July 1, 1920, including 45,177 noncombatant troops, will be 11,327 officers and 208,338 men, and a war strength of 11,942 officers and 287,846 men. The increase, as recommended by the General Staff, is to take place in 5 annual increments. When the increase is completed and the necessary oversea garrisons provided, there will be left in the United States just sufficient troops to organize 4 infantry divisions and 2 cavalry divisions, with necessary auxiliary troops.

The recommendation of the General Staff that a citizen volunteer army of 500,000 men, with a minimum of nine months' training in time of peace, be created was not accepted by Congress. This recommendation was attacked on various grounds as being radical, unnecessary, and impracticable, and as being particularly aimed at the Organized Militia, which the General Staff recommended be maintained as it existed at the date of the report. In the policy report, the General Staff summarized the limitations of the Organized Militia in the following language:

It is stated later in this report that 12 months, at 150 hours per month, "is considered the minimum length of time of actual training considered necessary to prepare troops for war service." Due to constitutional limitations, Congress has not the power to fix and require such an amount of training for the Organized Militia. No force can be considered a portion of our first line whose control and training is so little subject to Federal authority in peace. No force should be considered a portion of our first line in war unless it be maintained fully organized and equipped in peace at practically war strength. This would exclude the Organized Militia from consideration for service in the first line *mainly because of the impossibility of giving it in peace the training required for such function.*

In the consideration of this question, the constitutional limitations regarding the militia occupied most of the attention of Congress to the exclusion of the standard of training necessary to prepare troops for service in the first line. Congress believed, as shown by the National Defense Act, that the constitutional questions that were raised were not serious enough to interfere to any extent with the transformation of the Organized Militia into a citizen force substantially in number as recommended by the General Staff, and the bill, as passed, provides that at the end of five years the National Guard will consist of about 17,000 officers and 440,000 men, the period of enlistment in the National Guard being six years, three with the colors and three with the reserve of the National Guard. A liberal provision is made in the bill for the payment.

The period of training prescribed for the National Guard is 15 days' field service, including target practice, and 48 armory drills of not less than 1½

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hours, or an annual training of approximately 25 days, or 75 days in three years. This period of training is six months' less than the peace training recommended by the General Staff for the citizen army, and nine months' less training than necessary for war service, and, in my judgment, precludes this force from being fit for war service until it has received at least six months' additional training in time of war. I am entirely in accord with the opinion of the General Staff that troops with less than 12 months' intensive peace training cannot be considered dependable troops for war service.

The debate in Congress and the discussion in the press of the country indicated that there is a very widespread, serious, and vital misconception in this country in regard to the time it takes to train the individual soldier and the organization of which he is an element.

In the belief that soldiers can be very quickly trained and armies improvised, we not only run counter to the military opinion and practice of practically all the other great nations of the world, but we run counter as well to our own experience as a nation in war. The time required for the training of armies depends largely on the presence or absence of trained officers and non-commissioned officers. If there be a corps of trained officers and non-commissioned officers and a tested organization of higher units with trained leaders and staff officers, the problem of training is largely limited to the training of the private soldier. This has been satisfactorily accomplished in Europe, as is being demonstrated in the present war, by giving the soldiers in time of peace two years of intensive training with the colors and additional training in the reserve.

It should be obvious to any unprejudiced mind that if we are to *defeat* highly trained and splendidly disciplined armies of our possible enemies, our own forces when called upon for battle should have training and discipline at least equal to that of our opponent. While we have splendid material for soldiers, for us seriously to claim that the average American youth can be trained and disciplined in less time than the average English, French, German, or Japanese youth argues a decided lack of understanding on the part of our people of the progress and character of the English, French, German, or Japanese people. All that we can hope for and confidently claim is that, given equal intensive training as to time, under equally favorable conditions as to officers and noncommissioned officers for instructors and leaders, our soldiers will be prepared to assure in war the success of our armies.

Under their systems of intensive training other nations require approximately 6 hours' daily work in theoretical and practical instruction of each soldier, or approximately 4,000 hours during the 2-year period of training. In our Regular service, due to the necessity of depending on volunteer enlistment, we require in 3 years approximately the same number of hours that the army in which universal and compulsory service exist obtains in 2 years.

If we continue to accept approximately 4,000 hours as our standards of training and discipline, we will meet our opponents on practically equal terms, providing that the quality of our instructors and leaders is up to their standard. If we adopt a lower standard of training, we lessen directly the fighting efficiency of our troops.

It should be clear that troops trained for 1 year of intensive training, or

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approximately for 2,000 hours, are only *one-half* as well trained and *less than one-half* as well disciplined as they would be if they had 4,000 hours of training in 2 years. It is obvious that troops trained for only 1 year in time of peace will have to be given additional training in time of war before they can successfully oppose troops with the high standard of training and discipline that is given in 2 years in time of peace, and that we will have to make up for any deficiency in training and discipline by decided superiority in numbers.

If we cannot increase the period of training for the National Guard to the minimum laid down as essential by the General Staff, and it is very doubtful if we will be able to do so and keep the force recruited to the maximum authorized by Congress, we are confronted by a serious situation. The difficulty that is being now experienced in obtaining recruits for the Regular Army and for the National Guard in service on the border and at their mobilization camps raises sharply the question of whether we will be able to recruit the troops authorized by Congress in the National Defense act, both Regular Army and National Guard.

It is, in my judgment, a cause for very sober consideration on the part of every citizen of the country when the fact is fully understood that the units of the National Guard and the Regular Army have not been recruited to war strength in the crisis which we have just passed through. The number of units in both organizations is relatively small and the total number of men needed to recruit them to war strength certainly not great—almost negligible, in fact, when considered in relation to the total male population in the United States of military age; that is, men between 18 and 45 years. Many of the elements which favor recruiting under a volunteer system in this country existed at the time of the call for mobilization of the militia. . . .

In my judgment, the country will never be prepared for defense until we do as other great nations do that have large interests to guard, like Germany, Japan, and France, where everybody is ready and does perform military service in time of peace as he would pay every other tax, and is willing to make sacrifices for the protection he gets and the country gets in return. The volunteer system in this country, in view of the highly organized, trained, and disciplined armies that our possible opponents possess, should be relegated to the past. There is no reason why one woman's son should go out and defend or be trained to defend another woman and her son who refuses to take training or give service. The only democratic method is for every man in his youth to become trained in order that he may render efficient service if called upon in war.

* * * * * *

Universal military training has been the cornerstone upon which has been built every republic in the history of the world, and its abandonment the signal for decline and obliteration. This fact was fully recognized by the makers of our Constitution and evidenced in our early laws. A regular army was regarded as inconsistent with the principles of free government, dangerous to free institutions, and apart from the necessities of the times. All were imbued with a patriotism which would make them stand shoulder to shoulder in upholding the laws, and in the defense of the common country, sharing equally the blessings of peace and the hardships of war. The law required every able-bodied male between 18 and 45 years to keep himself

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provided with rifle and ammunition and to attend muster, and was in effect compulsory military service. They were called together for training at muster time only, for the outdoor life of the early settlers was considered sufficient training for any military duty they were then liable to be called upon to perform. Unfortunately the doctrine of states' rights, crept in to prevent the enforcement of Federal law, and each state was left to build up its militia. . . .

A few years ago we reached across the seas and assumed responsibilities of insular possessions and alien races. In the interest of advancing civilization we have built the Panama Canal. We have given a fiat to the world that on this hemisphere at least must survive the principle that rulers derive their just powers from the consent of the ruled. We claim an enlightened civilization of over a hundred million people and stand the richest country in the world. As a nation we are devoted to the peaceful avocations of industrial and commercial life. We treat others as we desire to be treated. Few have knowledge of war and fewer still any training for its rigors. We are entering fully into the affairs of the world and as the greatest of nations we must be ready to uphold and protect our institutions.

It is fundamental with a free people that equal opportunities and protection under the law brings equal responsibility in upholding and maintaining the law. Each owes to the body politic his duty not only in civil affairs but also in the defense of the nation. But with us thousands have been inculcated with the belief that wars were to be ended and that the United States should, as the exponent of the highest civilization, set an example in a minimum of military preparedness, and some even advocated that the Army and Navy be disbanded. The country became apathetic in the training of its people for national defense. But the awful cauldron of war into which Europe was suddenly plunged has served to awaken us in a measure to a realization that we must believe in ourselves, and, as the exponents of a democracy that should regenerate the political systems of the world, we must be ready to hold our place in the councils of the world, and to do this we must be physically fit, or we shall be brushed aside by the vigorous manhood of other races who sacrifice self that the nation may live.

During the months of May and June hundreds of thousands marched in so-called preparedness parades to the plaudits of onlookers. But when the militia was called out in June to protect our border, it was with the utmost difficulty that its units were recruited to the small number required, and some were never filled. The spirit was rife to let somebody else do it. Not only is there evidence of the volunteer spirit being moribund, but the states have for years been unable to make an efficient showing with the militia, even with the generous assistance of the General Government in qualified instructors and supplies. It would seem that the self-reliance of the individual, like that of the states, had given way to dependence upon others. The fine volunteer spirit of the states militia was injured in the demand for Federal pay in time of peace. It sounded the knell of patriotic military training for individuals and commercialized the highest duty that a State can demand from its people. We have fallen away from the teaching of the Fathers, for there is no longer instilled into our people the fundamental doctrine that every man owes a military as well as a civil obligation to his Government. . . .

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NATIONAL SERVICE

TRAINING CAMPS SUPPLEMENT

February, 1917

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NATIONAL SERVICE

TRAINING CAMPS SUPPLEMENT

February, 1917

A LETTER FROM THE EXECUTIVE COMMITTEE OF THE MILITARY TRAINING CAMPS ASSOCIATION OF THE UNITED STATES

To the Members of the Military Training Camps Association of the United States:

The Military Training Publishing Corporation, organized under the auspices of our Association to publish National Service, proposes to send free to each member of the Association a copy of the first two issues of the magazine and of the Training Camps Supplement. Thereafter, the magazine and the Supplement will be sent to those members who subscribe. The special price for the magazine, including the Supplement, for members of the Association is $2.00 a year. We believe that National Service deserves the support of every member of the Association.

The Supplement will contain training camp news from the various centres of activity and official and semi-official communications of interest to the members. We are also particularly fortunate in being able, by means of the Supplement, to give to every member an opportunity of taking the correspondence course of winter theoretical instruction conducted by Capt. Ralph M. Parker, U. S. Cavalry, under the authority of Headquarters, Eastern Department, U. S. Army. As this will be in all probability the only correspondence course given this year under official sanction, we strongly recommend all men to enroll for the course, and especially those who contemplate taking their examinations for the Officers' Reserve Corps. The course is open to all members of the Association who are subscribers to the magazine. The outline of the course and method of enrollment are indicated by Captain Parker on page 17 of this Supplement.

We again commend National Service to the patriotic spirit of our members. We believe that it has an important mission to fulfil, and we know that its success will be largely measured by the interest shown in it by the seventeen thousand members of this Association. For that reason we hope that members will feel entirely at liberty to submit freely their views, criticisms, and suggestions.

Executive Com., M. T. C. A. of U. S.

January 18, 1917

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THE FEDERAL TRAINING CAMPS

NOTHING better illustrates the insistent desire now amounting to a demand for opportunity for military training than the extraordinary growth of the Federal Training Camps in 1916. Beginning with 264 in 1913, the attendance grew to 763 in 1914, 3,383 in 1915, and 16,134 in 1916. When it is considered that except for about 1,000 of the men who attended camp in September, 1916, after the passage of the Army Appropriation Bill, all of these twenty thousand men bought their own uniforms and paid for their own transportation and subsistence with very little encouragement from the Government, the movement must be considered as one of the most remarkable spontaneous demonstrations ever witnessed in American life. It proceeded from a deep-seated and earnest conviction that something radical must be done and done at once to arouse the people and the authorities in power to the fact that the citizens of the country are no longer content to be left helpless in the face of a world in arms, constantly growing more powerful and menacing.

The interest, far from slackening, has steadily increased. Starting as a movement for individual training without much relation to general policy, there has developed a firm conviction in the mind of practically every man who has attended these camps that a general system of training, placing the obligation squarely where it belongs, on the shoulders of all able-bodied young men, is the only right system and the only effective system. These twenty thousand men have become missionaries throughout the country, and while often crying in the wilderness they are making their influence constantly felt in a thousand different ways not apparent on the surface. They are ordinary citizens who chose to leave their occupations at their own expense to testify to their belief that the military system of the country needed radical reformation. Their motives cannot be questioned. Their opinions are definite and based on personal experience and their influence is certain to grow from day to day, from month to month, and from year to year until their convictions, permeating through the minds of the people, are reflected in an irresistible public demand that a just and effective system be put in force. These men must never lose heart. They must have faith in their convictions. They must appreciate the obstacles and the inertia to be overcome and they must work together with a single mind and purpose to accomplish the patriotic object which they all have in view.

THE NATIONAL COMMITTEE MEETING

THE National Committee of the Military Training Camps Association of the United States met in New York, on November 24th to 26th, 1916. The business session was held on Friday afternoon, November 24th, at the University Club, the Chairman, Dr. Henry S. Drinker, presiding. Eighty-five members of the Committee were present, besides a considerable number of members of the Enrollment and Finance Committees of the Eastern Department. Practically every section of the country was represented, and it is significant of the interest shown that nearly 50 members came from points more than 500 miles away, at least two coming from the Pacific Coast and two from the Southwest.

On motion by the Hon. William

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Marshall Bullitt, of Kentucky, the following resolutions were unanimously adopted:

RESOLVED, that the object and policy of this Association is to bring about a system of universal obligatory military training and equal service for the young men of the United States, under exclusive Federal control, and that this purpose be publicly announced and followed as the policy of this Association;

FURTHER RESOLVED, that the Executive Committee of the Association take such steps as it may be advised to advocate Federal legislation for a system of universal training.

On motion of the Hon. John Purroy Mitchel, Mayor of New York, the following resolutions were also unanimously adopted:

RESOLVED, that the National Committee of the Military Training Camps Association of the United States expresses its deep appreciation of the loyal, patriotic, self-sacrificing and capable service at the Mexican border performed by the officers and men of the National Guard, including many members of this Association.

WHEREAS, we feel confident that a great majority of the past and present members of the National Guard agree with us that the volunteer system has demonstrated its gross inequality and injustice, as well as ineffectiveness, and that the only sound military policy for our democracy must rest on an equality of obligation and involve universal military training and service under Federal control, be it

RESOLVED, that we invite the coöperation of all present and former members of the National Guard in securing legislation for the universal obligatory training and service of the youth of the country, under exclusive Federal control, and the repeal of all present legislation inconsistent therewith.

In the evening a dinner was held at the Harvard Club, at which were present those in attendance at the afternoon session, and several other members. Mayor Mitchel presided. The guests of honor were General Wood, and General Barry.

JOINT REPORT OF THE CHAIRMAN AND SECRETARY OF THE NATIONAL COMMITTEE

(November 24, 1916.)

1. *General Review of Progress to Date.*

The training camp movement began with the Student Camps of 1913, which were instituted by the War Department through the initiative of Major-General Leonard Wood in coöperation with certain of the university presidents. The so-called Business Men's Camps began in August, 1915, with the first Senior camp at Plattsburg, N. Y. The progress of the movement with respect to numbers is graphically illustrated by the following table:

1913.	Gettysburg, Pa., and Monterey, Cal. (Students' Camps)		264
1914.	Asheville, N. C., Burlington, Vt., Monterey, Cal., and Ludington, Mich. (Students' Camps)		763
1915.	Ludington, Mich., San Francisco, Cal., and Plattsburg, N. Y. (Students' Camps), 956; Plattsburg, N. Y., Fort Sheridan, Ill., San Francisco, Cal., and American Lake, Wash. (Senior Camps), 2,427		3,383
1916.	Plattsburg, N. Y. (5 camps, June to Oct.)	12,198	
	Ft. Oglethorpe, Ga. (2 camps, May and June)	556	
	Ft. Sam Houston, Texas (1 camp June)	421	
	Monterey, Cal. (1 camp, July)	1,090	
	Ft. Douglas, Utah (1 camp, August)	578	
	American Lake, Wash. (1 camp, August)	125	
	Ft. Terry, N. Y. (for boys over 15-18, 1 camp, July)	1,166	
			16,134

More important, however, than the extraordinary increase in numbers are the quality of the men attending, the general public interest in military affairs aroused through the medium of the camps, and the effect of the training camp movement on military legislation and policy. The quality of the men has been especially high. The summer camp plan of intensive military training has proven its value and practicability as suited to the needs of our country, and the movement has served to arouse the interest of thousands of citizens in military organization and policy, who, prior

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to the development of the training camps, had no information or interest in the subject. A strong and solid foundation has been laid for future work of great value and importance to the country.

2. *Formation and Organization of Military Training Camps Association.*

In 1913 the students attending the first training camp at Gettysburg formed an organization known as the "Society of the National Reserve Corps," which was joined by the members of subsequent student camps. In 1915 the Senior camps at Plattsburg, N. Y., and Fort Sheridan, Ill., organized for the purpose of furthering the training camp movement. Following conferences between committees of the Student and Senior organizations, a plan was adopted for the merger of them all in the Military Training Camps Association of the United States, and this plan was duly ratified in January, 1916, when our Association came into existence.

The by-laws of the Association seem to provide adequate machinery for an effective organization of national scope. All camps and sections of the country are represented in the National Committee of the Association, which exercises general control over the management of the Association and passes on questions of policy. The National Committee is authorized to appoint an Executive Committee. While centralization is thus provided through the National Committee as to the general policies of the Association, the by-laws provide for decentralization by military departments as to recruiting work and local activities. The by-laws contemplate that the members of the National Committee from any particular military department shall constitute the executive committee of that department and shall appoint their Enrollment and Finance Committees in each department, so that each department shall manage its own affairs, subject only to the general lines of policy laid down by the National Committee. . . .

We are fortunate in having the assistance of the Advisory Committee of University Presidents on the summer camps, a body of eighteen representing colleges in all sections of the country. This Advisory Committee forms an integral part of our National Committee and their counsel and active assistance have been invaluable.

3. *Legislative recognition and appropriation.*

Prior to 1916 the training camps had no certain legal status and practically no Government funds were available for their support. It became one of the first duties of your officers to obtain the legalization of the camps and a proper appropriation for the expenses of the men attending. While there has been some question raised as to whether the appropriation for expenses is beneficial or not, we are entirely clear that such an appropriation is essential, because otherwise the camps are limited to men of considerable means —a result which is entirely contrary to the spirit and purpose of our movement. This applies particularly to college students.

Accordingly the officers of the Association devoted themselves during the Congressional session in the winter of 1916 to obtaining legislative recognition for the camps and a proper appropriation. After a great many difficulties they were able to obtain the enactment of Section 54 of the National Defense Act of June 3, 1916, conferring upon the Secretary of War very broad authority to conduct these camps. There was subsequently pro-

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vided an appropriation of $2,000,000 to maintain the camps and for the expenses of the men for the fiscal year ending June 30, 1917. This appropriation was unfortunately not made available until August 29, 1916, which was too late for it to affect the attendance at the 1916 camps, but we believe that the principle has been established for future years. Refunds from the present appropriation are now being made to those who attended the 1916 camps.

Attention is called to the fact that the training camp legislation is the only legislation providing for the training of citizen soldiers under exclusive Federal authority and free from the curse of divided state and Federal control. In that aspect Section 54 of the Defense Act is considered by the best authorities to be very important, as providing a basis for future legislation along sound lines.

4. *Finances.*

The men attending the training camps in 1915 and their friends contributed to the general funds of the Association about $81,000, of which about $75,000 has been spent or contracted for. In addition about $35,000 was raised by local committees (The report* of the executive secretary sets forth in some detail the recruiting work of the Association, and the report of the treasurer shows how the money contributed was spent.) . . .

5. *Plans for* 1917.

During 1917 the Association should develop and extend its work by placing the advantages of the camps before an increasing number of young men. The colleges of the country, including, as they do, about 250,000 male students, provide a large field, and if the Association is provided with sufficient funds to make an organized effort in the colleges the attendance of students will doubtless be largely increased. A comprehensive campaign will also be made by the Junior Division of the Training Camps Association to enroll a large number of boys between fifteen and eighteen for the Junior camps that will be held in 1917. There is practically no limit to the scope of the work in this direction.

6. *The permanent policies of the Association.*

The object of the training camp movement is not to raise a volunteer military force. Its objects are to foster a sense of patriotism among the young men of the country, to give them a correct idea of the need of preparation for the Nation's security, and to bring about the adoption of a military policy founded upon equal obligation and equal service through a system of universal training upon lines similar to the Swiss and Australian systems, but adapted to American conditions. Since the sentiment of the members of the Association for universal training has been repeatedly expressed with practical unanimity, we recommend that this meeting adopt a resolution stating that the adoption of a system of universal training is the main purpose of our Association, and that this policy be publicly announced as the fundamental object for which the Association stands. . .

7. *Importance of coöperation.*

The great success of the training camp movement so far has been due to the enthusiastic coöperation and individual work of the men interested, and its future success must rest upon the same basis. Men from all parts of the country must keep closely in touch with one another and work in harmony. While good organization is essential and while substantial funds

*A copy of the Treasurer's Report will be sent on request.

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are needed, we would emphasize the fact that our success in the future, as in the past, must depend upon the willingness of individuals, who believe as we do in the importance of the work, to sacrifice to some extent their personal interests and devote their individual time and thought to furthering the movement and what it stands for.

In conclusion we wish to express the appreciation of the officers of the National Committee for the enthusiastic and efficient work which has been done throughout the Nation by the committees and individual volunteers who have contributed their time, effort, and thought without compensation to forwarding the training camp idea. Future success depends primarily upon the continuance of this splendid *esprit de corps*, and with its continuance even a larger measure of success is assured for the future.

Respectfully submitted,
HENRY S. DRINKER, Chairman.
GRENVILLE CLARK, Secretary.

REPORT OF EXECUTIVE SECRETARY

(November 24, 1916.)

1916 RECRUITING CAMPAIGN

When this Association was organized in January, 1916, about four thousand men had attended a Federal Training Camp.

The 1916 camps with their respective attendance were as follows:

EASTERN DEPARTMENT:	
Fort Oglethorpe, Georgia...	556
Plattsburg, New York.....	12,198
Fort Terry, Plum Island, New York.....	1,166
SOUTHERN DEPARTMENT:	
Fort Sam Houston, Texas...	421
WESTERN DEPARTMENT:	
Monterey, California.....	1,090
Fort Douglas, Utah.....	578
American Lake, Washington	125
Total.....	16,134

The Central Department Camp, at Fort Benjamin Harrison, had to be abandoned at the last moment on account of lack of officers, due to the Mexican situation.

In view of the failure of Congress to pass, until late in August, the Army Appropriation Bill providing for the reimbursement of transportation and subsistence expenses, the attendance was gratifying. There can be no question that it was chiefly due to the splendid response of the 1915 men to the organized appeals of the various committees of this Association.

I will try to touch, as briefly as possible, on the various phases of the recruiting campaign, so far as our Headquarters Office was directly concerned, fully realizing that much excellent work, of which we here have only slight knowledge, was done independently by committees and individuals in the Southern and Central, and especially in the Western Department, where the campaign was conducted practically without assistance from this office.

EASTERN DEPARTMENT:

When we opened our executive offices General Wood had already decided to hold a camp at Fort Oglethorpe, Georgia, in the spring. We were not responsible for the inception of this camp or for the enrollment, the recruiting for it being in the sole charge of an Army officer. This Association, however, was able to be of some assistance in printing and distributing literature, lantern slides, et cetera,

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and the payment of traveling and clerical and other administrative expenses. The withdrawal of the Eleventh Cavalry to the border at the last moment and consequent postponement of the opening of the camp from April to May was unfortunate, but nevertheless, the May and June camps, though not large and not well attended by Southerners, were most successful and must have been of educational value in the South.

In this Department our most highly organized work was directed to piling up a big enrollment for Plattsburg. The northern Atlantic states were divided into districts, each in charge of a committee and in close touch with this office, the larger districts being again sub-divided into smaller districts reporting to the former. The work naturally developed along five general lines of endeavor:

1. Circularizing all classes of men apt to be interested. We created and used, by means of the Government frank, a large but carefully selected mailing list, printing and distributing over three and a half million pieces of the official Government literature besides 38,000 illustrated booklets and 10,000 photograph albums.

2. Organized publicity and advertising. Besides encouraging local spontaneous publicity we made an effort, by means of a professional publicity agent and paid advertising on a large scale, to place the training camp movement before as many of the general public as possible. We put full and half page advertisements as to all the camps in publications having an aggregate national circulation of more than 4,500,000, and smaller advertisements in the Metropolitan press. We ran a volunteer speakers' bureau, organized meetings, lantern slide talks, et cetera. Posters advertising all camps were printed and put up in large sections of the Eastern Department and to a less extent throughout the whole country.

3. The creation of a nucleus in as many places as possible—that is, an attempt was made to organize local committees, to interest one or two leading men in the smaller places and especially in the colleges, supplying them with propaganda material and keeping in close touch by means of visits and correspondence.

4. Using "Intensive Treatment" or "Endless Chain"—that is, putting it up to each old training camp man to send in the names of recruits and urging these new men in turn to get others. This system was used most extensively and successfully.

5. Securing consent of employers to let their men attend camp without loss of salary, without which much of the other activities would have been unavailing. A remarkable list of these employers was secured.*

Besides the above, there were, of course, all sorts of miscellaneous activities too numerous to mention, pertaining particularly to the New York City district, and conducted largely by special committees appointed for the purpose, such as the monthly winter meetings, the Preparedness Parade, the organization of graduate committees, et cetera.

Much productive work was done along the same lines by practically independent committees in several large cities, in several of which the work was highly organized. The New England and Eastern Pennsylvania committees, for instance, had their own local news services, lecture bureaus, special funds, and "Plattsburg scholarships" for deserving students, and printed and distributed their own

*This list will be sent upon application.

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banners and posters. Too much credit cannot be given to these local committees.

The camp for Boys at Fort Terry, Plum Island, New York, was organized and recruited by a group of Plattsburg men working with General Wood. The inception of these Junior Camps is one of the important events of the year.

CENTRAL DEPARTMENT:

For obvious reasons the Central Department members of our Association had an infinitely harder task than we had in the East. The shortage of regular troops and officers resulted finally in the summary cancelling of the camp just as the recruiting campaign was getting started. This office tried to coöperate and was able to be of some assistance, especially in the beginning, by contributions in money, propaganda material, and advertising. I went to Chicago several times and to eight other of the larger cities, assisting in forming local committees most of which subsequently did some excellent work. Too much credit cannot be given to them and to the Volunteer Recruiting Committee in Chicago.

SOUTHERN AND WESTERN DEPARTMENTS:

Beyond the original visit of Mr. Blanchard of the Eastern Department Enrollment Committee, a contribution in money (to the Officer in Charge in the Southern Department) and in the national advertising, this office had little to do with the success of these camps, and was only able to keep in touch by correspondence. It is hoped that reports from Committees in charge in these Departments will be submitted later. The complete story of the movement this year in the far West and Southwest would form a very interesting and instructive chapter in our Association's history.

MISCELLANEOUS ACTIVITIES

Our office has been engaged in a number of matters more or less intimately connected with recruiting. Numerous trips were made to Washington and consultations had with the Secretary of War and officials of the Department in connection with the appropriation and its administration, the regulations governing training camps, etc. A roster of all training camp men is almost completed. Men will be listed both geographically and by camps. The delay in getting out the roster is on account of the amount of incorrect and incomplete data furnished by some of the camp authorities due to the failure of the Government to supply them with necessary clerical services. At the request of General Wood we are investigating the possibilities of a winter camp in the South. Plans are being considered for cooperating with the Boy Scout movement. Pursuant to an arrangement with the Auditor for the War Department, this office printed and distributed to all 1916 training camp men the official application for refund and is conducting a very large correspondence with individuals concerning special questions in regard thereto. Local clubs, committees, and associations of training camp men are being encouraged and advised as to the form of organization best suited to their needs. Several thousand feet of moving picture film taken at Plattsburg last summer, under our direction, are being arranged. . . .

PLANS FOR 1917

As the problem is, of course, not the same in each Department, it is impossible to lay down hard and fast

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rules. For example, in the Eastern Department extensive advertising and paid publicity would not seem to be essential for a successful attendance at Plattsburg next year, whereas, in the other Departments such methods probably would be necessary to make known the new camps. . . .

It is hard to say, until we know what the War Department proposes to do and spend on recruiting, just how much this National Headquarters Office will have to do . . . In any case, my own personal views are that the recruiting work should be decentralized to a considerable extent, as it is manifestly unwise for one office in New York to attempt to recruit for camps all over the country. There should be a central office in each Department in close touch with the Department Commander and with our National Headquarters. In each Department strong local committees should be formed reporting to their Department headquarters. There are 67 cities represented on our National Committee, and with the four hundred members of the four enrollment committees to be appointed, there should be over 300 cities in which there will be one or more training camp men known to be actively interested and expecting to give some of their time and thought to getting recruits for next year's camps. There are already a number of strong local organizations and many others will spring up. With such a nucleus it should not be difficult to present the advantages of the training camps to the young men of the country. Besides being the headquarters of the Eastern Department, the activities of this office should be chiefly advisory; except for being the centre for the supply and distribution of literature and other propaganda such as moving picture films, lantern slides, et cetera, applicable to all camps.

There is another point which I would like to emphasize particularly. It seems to me that we should pay particular attention next year to the students in colleges and senior classes of the High Schools. This is the class of men most worth getting from the military point of view. It is also the class which should be the easiest to get now that the Government will pay all expenses. A large proportion of college boys are not employed and do not earn anything during the summer, and there is nothing to prevent them from going to camp. They would be much easier to reach through the nucleus system, being all together in one unit which can be covered comparatively easily, instead of being scattered through every business and profession. A committee should be appointed in every college in which there are undergraduates who attended camp last summer. I believe that special emphasis on these very young men would bring the greatest returns for the amount of time and labor expended.

Just how far we can carry out these plans depends of course on the amount of contributions to the Association.

Respectfully submitted,
DeLancey K. Jay,
Executive Secretary,
M. T. C. A. of U. S.

STATEMENT BY MAJOR HALSTEAD DOREY, U. S. INFANTRY

(Officer in Charge of Civilian Training in Eastern Department.) [*January 12, 1917.*]

CONDITIONS affecting the Military Training Camps have changed materially during the past year. They are now recognized by law as a part of the general defense scheme of the country and the payment by the Government of the expenses of those attending has been

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authorized. The number of men who have attended one or more camps has increased to an extent only dreamed of by the camps' most optimistic friends.

This large increase in attendance is due almost entirely to the efficient recruiting work of the members of the Military Training Camps Association, and of that Association as a body. When preparations for last year's camps were under way there were no Government funds available for strictly recruiting purposes, and it was only through the efforts of the Association that an effective campaign could be carried out.

The prompt and efficient assistance of the officers and members of the Association will always be gratefully remembered by the officers of the Army on duty connected with the organization of the camps.

The following Federal Military Training Camps will be held in the Eastern Department during the calendar year 1917.

At Plattsburg, New York: For men between the ages of 18 and 45, both inclusive (and men between the ages of 45 and 55 upon special authority of the Department Commander.)

1st Camp—June 2nd to July 1, 1917,
2nd " —July 7th to August 5, 1917,
3rd " —August 11th to September 9, 1917,
4th " —September 15th to October 14, 1917.

Camps for the junior division, for boys between their 15th and 19th birthdays, will be held at Fort Terry, Plum Island, N. Y., and Portland, Me., as follows:

1st Camp—June 30th to July 28, 1917,
2nd " —August 2nd to August 30, 1917.

If the number of applications warrant, additional camps, both senior and junior divisions, will be established in the Department.

The question of a Southern camp is still undecided. General Wood is now on an inspection trip in the South and will take up this question while there.

Last fall a board of officers was convened by direction of the Secretary of War to draw up regulations for future camps. The report of the Board has been forwarded to Washington for the action of the Secretary. This report includes a scheme for winter instruction, provided for in the National Defense Act.

Pending the publication of the regulations, Captain Ralph M. Parker, 2nd Cavalry, has been detailed to conduct as many classes as time will permit. Unfortunately no other officers are available to work with Captain Parker, and the number of classes he can conduct is necessarily limited.

At present the New York City class meets at the DeWitt Clinton High School every Thursday night from eight to about ten-thirty. Between five and six hundred are enrolled.

Classes, to meet twice a month, will be started in Boston and Philadelphia during the present month.

The course consists of lectures and oral tests on the following subjects; the object being to cover as thoroughly as practicable in the limited time those subjects which it is essential a junior reserve officer should know, but which there is not time for him to study during his tours at camp:

Small Arms Firing Manual.
U. S. Army Regulations & Company Administration,
Field Service Regulations,
Topography,
Manual for Court-Martial.

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TRAINING CAMPS IN SOUTHERN DEPARTMENT

By Major H. L. Laubauch, U. S. Infantry

THE Training Camp movement in the Southern Department had a modest beginning in Camp Cecil A. Lyon held at San Antonio, Texas, June 12th to July 8th, 1915.

At the College Camps of the former years, and at the Plattsburg Camps of the preceding year, there were a few attendants from the Southwest, and these, upon their return, carried with them the "Plattsburg idea." Gradually there developed among the men of this part of the country the desire to be among those who had accepted preparedness as a necessity in carrying out the obligations of their citizenship.

This was aided greatly by the information sent out from time to time by the Military Training Camps Association of the United States, and resulted in committees from various cities requesting that civilian training camps be held in their several localities. In response to this the Department Commander, General Funston, agreed to have a civilian training camp wherever 400 attendants could be secured.

To those who have been dealing with the large numbers attending the Plattsburg Camps, this number may appear insignificant, but to those of the East who have viewed through the windows of a Pullman the uninhabited miles upon miles of this vast Southwest, it is realized that 400 is a large number to gather in a camp in this part of the country.

There was never a camp organized under more unfavorable circumstances than the camp held here last year. Economic conditions were very much against it, and gentlemen of leisure, or even of circumstances such as to permit their dropping their vocations and making the expenditures necessary in attendance upon one of these camps, are comparatively small in this new country. Then, border conditions were such that it was a question from day to day as to whether a camp could be held at all.

It was finally decided to make a beginning with one camp at San Antonio, and the advertising and recruiting in connection with this were undertaken in a systematic manner. It is doubtful whether much could have been accomplished without organization and without funds, as we then were, had not the Military Training Camps Association not only come to our aid financially in the most liberal manner, but with timely advice and assistance carried us over the weak places in our experience.

It is doubtful whether anything has been so systematically advertised in this part of the country as was the last training camp, and it may be mentioned as a matter of interest that between fifty and sixty thousand pieces of mail were sent out in this campaign of education, which resulted in obtaining 421 attendants, and how large a number this really is may be judged when the statement is made that we feel certain that we now have 421 men ready to assist in the furtherance of the movement.

By the time active work was taken up in the organization of this camp practically the whole mobile part of the Regular Army was on duty in this department, and practically all the officers of experience, who, as members of the General Staff, had been instrumental in developing the College Camps, and those who had been instructors in the college and Plattsburg Camps, were then in this department and were available. In making plans for the camp I surrounded myself

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by those whom I believed were the best men of former camps, and together we made a very careful study of all that had gone before with a view to profiting by the past camps, and to carrying our new camp one step in advance. We accepted everything that the experience of the past seemed to indicate as well to retain, and we tried to avoid those things which in the past had not come up to expectations.

We adopted a policy then which seemed to us to be correct, and one to which we intend to adhere this year.

There were two ways of looking at this matter, and one question to be decided. We could either train masses of men, or we could make our training more individual, and the question to be decided was, which is our greater need; enlisted men or officers?

One has only to read our military history to see how we have suffered before the conclusion of all our wars from the lack of officers. One has only to examine into the great war of to-day to see how well those countries have fared who had large reserves of officers, and how badly has fortune treated those who were not prepared in this direction.

We, therefore, decided that we had better train individuals with a view to their being officers of reserves, whose services as instructors and commanders could be utilized in event of necessity, in the training of large bodies of men, and we adopted a plan, briefly as follows: Each civilian company should have one captain and one lieutenant from the regular infantry, together with two sergeants, one corporal, and one private from the same arm, and that the attendants in each company should be limited to not over 60. As a matter of fact we had no company so large as this. The instruction from the first was made as thorough as possible and optional work was reduced to a minimum on the theory that we were going to train officers and it was, therefore, necessary for each one to cover the entire subject.

Just about everything possible happened to break up the camp, for we lost one instructor after another, our engineering detachment, the cavalry, the field artillery, and even the drum corps, and yet we kept hammering away and are certain that every one got all the instruction that could be imparted in the twenty-eight days of the camp, and all the work that the physical welfare of the average man could stand.

Following what we believe to have been work along proper lines last year, we are going to continue the policy, and we are not going to try to have large camps or to half train masses of men. We are going to try to select men of excellent character, good physique, and of education enough to perform the duties of officers, and these we are going to keep in small companies with enough officers and non-commissioned officers from the regular service to enable us to give individual attention where such is needed.

Our program of last year needs but little alteration for those who are attending the first camp, but for those who have finished this part of the work we intend to open up new fields of study. We have also another plan, an idea of General Funston's, which he directed be adopted, and that is to take the training camp to the people, so that its lessons of patriotism and national duty may be carried to those whom we could not reach were we to have the camps successively held in the same place.

Our first camp will probably be held in Austin, Texas, from April 28th to May 27th, upon the conclusion of which the entire camp will be moved to a point in north Texas, somewhere

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in the neighborhood of Dallas, where the second camp will be held from June 9th to July 8th. Again the camp will move, and to Louisiana, where a tentative selection of Alexandria has been made for a camp to be held from July 21st to August 20th. This camp will be followed by a fourth camp somewhere in the neighborhood of San Antonio, probably from September 1st to 30th. In addition to these four camps there will be one in the Western part of the Department, probably in New Mexico, where Las Vegas suggests itself as a logical site. The period of this camp is not yet decided upon, but will probably be in the month of August.

We are already at work upon our summer plans and are making our selection of officers and troops to be used in that connection. We shall have a captain and one, or possibly two, lieutenants to each civilian company, together with a number of non-commissioned officers, and, for all such special work as field engineering, topographical sketching and signaling, there are already detachments of officers and enlisted men being trained as instructors, for the keynote of efficiency and thoroughness established in our camp of last year will be maintained.

On January 15th the active work of advertising, of educating, and of seeking enrollments was begun, and in this we are again to have the generous coöperation of the Military Training Camps Association.

GENERAL BARRY, ON CENTRAL DEPARTMENT PROSPECTS

(Extract from speech to National Committee, November 24, 1916)

I WANT to say to you gentlemen that we have in my Department a very efficient committee that has done great work in getting ready for our camps. They are so enthusiastic that even before I left the Philippines to come home, knowing that I was going to the Central Department, they wrote me and even offered to send a delegation to San Francisco to meet me. When I arrived in Chicago I found that we had a camp outlined for Fort Benjamin Harrison, and a promise of a very good attendance there. The Department, as I found it, was absolutely depleted of troops. They were all down on the border. Nevertheless, we were going to pull that camp off, until the mobilization struck us, and then what few officers we had had to be used in that mobilization. But with any troops returned to us, or any troops made available for us, I want to assure you that we will have camps next summer, and I want to pledge for you the entire support of every man and officer in my Department. We will have just as many camps as those who are willing to come make necessary, and we will work to the limit.

But, my friends, if this great country of ours is to maintain its standing, we have got to come to compulsory training. Any man that is fit to be a citizen of this country and take advantage of it ought to be willing not only to get ready to fight, but to fight for it when the time comes; and as a fighter he is no use unless he is ready, and these training camps are the best means that we have yet devised to bring it about. Just go on with your work; don't let anything stop you. Nothing of this kind can be forced through without obstacles that you have got to override; but go on and override them and force the issue, and we of the Army will try to do the rest.

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CENTRAL DEPARTMENT

SCHEDULE OF CAMPS FOR 1917

Senior Division:

Fort Snelling, Minn. July 2–28, Aug. 2–28.

Fort Sheridan, Ill. July 2–28, Aug. 2–28, Sept. 2–29.

Fort Riley, Kans. Aug. 2–28, Sept. 2–29.

Junior Division:

Fort D. A. Russell, Wyoming. July.

Fort Benjamin Harrison, Indiana. July 2–28, Aug. 2–30.

Fort Des Moines, Iowa (or other central point) July 2–28, Aug. 2–30.

PURPOSE *and* SCOPE *of* CORRESPONDENCE COURSE

WHEN a military emergency arises necessitating the calling out of civilian soldiers the progress of the mobilization is more or less retarded by the lack of training in the essential duties which fall upon newly appointed officers.

There has been some training given in matters pertaining to tactics and discipline, but in almost all cases where military instruction is imparted the duties which are non-tactical are at best only talked about by officers, the students getting no actual practice in the work, and generally taking no notes, on account of the vast scope of the subjects involved. This course is intended to give some instruction in those essential subjects which there is no time at the Training Camps to more than touch upon. It is only possible, with the limited space provided, to call attention to a few of the most important regulations which govern a company commander in the administration of his organization; to describe simple methods of making military topographical sketches; to discuss the simplest principles of rifle firing and the rules governing those engaged in conducting rifle practice; to state the simple rules in court-martial procedure; and to explain certain parts of the Field Service Regulations and Infantry Drill Regulations.

In the course which will be given in this magazine, brief notes are made from the various manuals published by the War Department, and attention is called to many points of which the average military student is entirely ignorant. Practical questions will be sent to those signifying their desire to enroll for the course. These questions should be answered and mailed to the "Officer in Charge, Correspondence Course," Governors Island, New York.

Those desiring to enroll for the correspondence course will please fill out the following coupon and address it to:

The Officer in Charge,
Correspondence Course,
Governors Island, New York.

RALPH M. PARKER,
Captain, 2d United States Cavalry,
Instructor.

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ENROLLMENT BLANK

I, _____ (Given name, initial and surname), a _____ (Rank), of _____ (Section) in the Officers' Reserve Corps, or an attendant in the 191__ _____ (Month) _____ (No.) _____ (Street) _____ (Location) Camp, or an applicant for attendance in a 1917 training Camp, _____ (City and State) (Rule out words not applicable) desire to enroll for the Correspondence Course to be conducted by the Headquarters Eastern Department, U. S. Army, Governors Island, N. Y. H., and agree to conscientiously follow the course as prescribed, time and circumstances permitting.

(Signature) _____ (Use pen and ink)

Date _____, 1917

(Typewrite or print this blank, with the exception of signature)

Mail to Officer in Charge, Correspondence Course, Governors Island, New York

I. NOTES *on* COMPANY ADMINISTRATION

By CAPTAIN RALPH M. PARKER

(2d. U. S. Cavalry)

MILITARY Discipline.—Every one in the military service must obey strictly and execute promptly the lawful orders of superiors. Use firmness, kindness, and justice. Punishments must conform to law and follow offenses promptly. Courtesy is indispensable to discipline and will be extended at all times.

Regulations forbid discussion of military persons and their acts. Efforts to influence legislation affecting the Army, or to procure personal favor must be made through regular military channels.

Rank.—Military rank is that character or quality bestowed on military persons, marking their station, and confers eligibility to command. Rank is held by virtue of office; also independently of office, as in the case of retired or breveted officers.

Command.—Command is exercised by virtue of office, and special assignment to duty of officers holding rank who are eligible by law to command.

The designation "company" applies to troops of cavalry, batteries of field artillery, and to companies and bands of all arms and corps. Any officer properly placed in command of any such unit is called the "company commander."

An officer relieved from any office will turn over to his successor all orders, public property, and funds pertaining to his command or duty.

Furloughs.—Furloughs on the prescribed form may be granted for periods of three months by post commanders, brigade and district commanders of territorial departments, chiefs at War Department bureaus, to enlisted men of their respective departments or corps. Furloughs for one month may be granted by mine

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planters, or by regimental commanders if the companies to which the men belong are under their control. Soldiers on furlough will not take with them arms or accouterments, will not leave the country, and will not be paid while actually on furlough except on special authority from the War Department. Enlisted men reporting at their proper stations before the expiration of their furloughs will receive in addition to their pay 30c. per diem allowance for rations for the period of the furlough.

Passes are given at the discretion of company and post commanders to the men directly under them. No commutation of ration allowance is given to men on pass.

Transfer of Enlisted Men.—Transfers of enlisted men will be made as follows:

1. When not involving change of station—
   a. Within a regiment, by the regimental commander.
   b. Within detached battalion, when more than fifteen days are required for exchange of correspondence, by battalion commander.
   c. Within a coast defense command, by the coast defense commander.
2. When change of station is involved—

As in the first instance but with the approval of authority competent to direct the travel.

3. Between organizations of the line of the Army—
   a. Within any post, by the post commander.
   b. Within any department, by department commander.
   c. Within tactical division, by division commander.

Deserters.—When a soldier deserts, his immediate commanding officer will—

1. Ascertain whether public property has been lost in consequence; if so, call a survey.
2. Charge the value of such articles against the deserter.
3. Turn over abandoned clothing to the quartermaster, with certificate showing its condition and deserter's name.
4. Turn over personal property to a council of administration for sale. The proceeds of the sale will be turned over to the company commander, who will deposit them with a quartermaster, and in no case give them to relatives or other claimants.

Discharges.—An enlisted man will not be discharged before the expiration of his term of service except—

1. By order of the President or Secretary of War.
2. By sentence of a general court-martial or military commission.
3. By direction of commander of department or mobilized division, by purchase; under rules governing such discharge (These rules are published from time to time by the War Department); on account of disability; on account of imprisonment under sentence of civil court.
4. Through order of a United States court on writ of habeas corpus.

Three blank forms for the discharge of soldiers are used as follows—

1. Honorable discharge for
   a. Expiration of enlistment where service has been honest and faithful.
   b. Certificate of disability, where service has been honest and faithful.
   c. Prior to expiration of enlistment, for the convenience of the Government, when the soldier's conduct has been honest and faithful.

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2. Dishonorable discharge, for sentence of court-martial or military commission.

3. Discharge, except as specified under 1 and 2.

If a company commander believes a soldier's reënlistment should not be recommended, he should notify the soldier at least thirty days prior to his discharge, and the commanding officer will cause a board of officers to be convened to make final decision in the case.

Deceased Soldiers.—Upon the death of a soldier, his immediate company commander will—

1. Secure his effects and make inventory of them.

2. Notify nearest relative.

3. Send duplicates of the inventory with final statement and medical report to the Adjutant General.

4. Deliver effects to legal representatives of the deceased.

5. If effects are not claimed they will be sold by a council of administration appointed by the commanding officer. The proceeds of the sale will be turned over to the quartermaster with statement as to what they are.

Extra and Special Duty.—Enlisted men performing duties which remove them from the duty roster will be reported on "extra duty" if receiving extra pay therefor from the *United States*, otherwise on "special duty."

Private work done for officers or in post exchange is not termed, or reported, as extra duty even though the men receive pay from the party employing them.

Non-commissioned officers cannot be detailed without authority from the Department Commander.

Medals of Honor and Certificates of Merit.—Medals of Honor are awarded by Congress to officers and enlisted men for distinguished acts of gallantry in action, beyond what would be required in line of duty and involving risk of life. Recommendation must be made within one year and should be accompanied by written testimony of at least two witnesses.

Certificates of Merit are granted by the President to enlisted men upon recommendation of commanding officer of regiment or corps to which such man belongs. This recommendation must be made within one year and for distinguished service seen preferably by the immediate commander. The man must be in the military service when the recommendation is made.

Two dollars per month is allowed to men holding certificates of merit throughout their service, both active and retired.

Flags, Colors, and Standards.—The "flag" of the United States is used on masts and flag poles.

"Standards" are carried by mounted troops. "Colors" are carried by all other branches of the service.

The difference between standards and colors is in size only.

Duties of the Company Commander.—The commanding officer of a company is responsible for its proper instruction and administration.

Non-commissioned officers are appointed by regimental commander upon recommendation of company commander. Capacity may be tested by appointing one lance corporal at a time, who may be reduced by court-martial or upon recommendation of company commander, by the officer having authority to appoint them. First sergeants, supply sergeants, stable sergeants, and mess sergeants are appointed by the company commander from the sergeants of the company. All other appointments in a company are made by the company commander.

The following reports and records are made: correspondence file and

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index; sick report; morning report; property cards; company council book; muster rolls; pay rolls; descriptive lists; clothing issue slips and records of sizes; company fund book; duty roster; target reports; field firing reports; monthly returns; delinquency book; property returns; memorandum receipts; statement of clothing issued; ration returns; efficiency reports.

Duties of Squad Leaders.—Squad leaders are responsible for: bunks and bedding being overhauled; floors, benches, tables scoured; arms and accouterments cleaned; leather articles polished; cleanliness of men; everything in order when going on duty; proper dress of men when leaving post on passes; preparation of squads for inspection.

The Company Council of Administration.—The council of administration consists of all officers present for duty with the company. The junior officer present will record its proceedings.

Company Funds.—The company fund consists of gross amounts from all sources, is received by the company commander, and with the concurrence of the company council is disbursed by him solely for the benefit of the company.

Route Maps and Journals of March.—Every commanding officer of troops on the march will require a suitable officer, preferably a mounted officer, to make a complete sketch of the route of march and to make a report of the march giving all necessary data concerning the country through which the march was made.

Property Accountability and Responsibility.—A company commander is responsible for public property pertaining to his company and cannot transfer such responsibility to enlisted men. Responsibility without accountability devolves when officer is not required to make returns therefor. An accountable officer is relieved from responsibility for property for which he holds a proper memorandum receipt. A responsible officer is not relieved from responsibility for property for which he has given a memorandum receipt, until he has returned the property to the accountable officer or has secured receipt from his successor.

Unserviceable property is classified as follows:

1. That which is worn out by fair wear and tear and is of no salable value.
2. That which is worn out by fair wear and tear and is of salable value.
3. That rendered unserviceable from causes other than fair wear and tear.

Property of the first class may be submitted to a surveying officer or an inspector, and the following classes may be destroyed: (1) clothing infected with contagious disease, (2) deteriorated stores which endanger health or other stores, (3) other property adjudged unsalable by officer as above. His decision is final as to whether property has salable value.

A surveying officer is appointed by the regimental or post commander to inspect and report upon the circumstances of the destruction or loss of property.

Under this authority ordnance stores will be limited to utterly worthless articles constituting soldiers' personal equipment (not arms), horse equipment, and target materials and supplies, not exceeding one hundred dollars in value for mounted organizations and fifty dollars for all others.

To order the destruction of property under this paragraph, it is necessary that the commanding officer personally inspect it and assure himself that the conditions justify the destruction. Should the value of property to be destroyed exceed five hundred dollars, the approval of the next higher commander is required.

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Property of the second class will be submitted to an inspector without prior action of a survey officer.

Property of the third class will be submitted to a surveying officer except in the case of public animals and, unless destroyed, will subsequently be submitted to the action of an inspector. In such cases inventory and inspection reports will accompany the report of survey.

Damage to and loss of property is classified as follows:

1. Unavoidable causes in ordinary service, or incident to active campaign.

2. Avoidable causes due to carelessness, willfulness, and neglect.

Military Correspondence.—An official letter should refer to one subject only and should always follow this prescribed form—

Place and Date.

From: John Jones.
To: Captain Samuel Smith, U. S. Army, Governors Island, N. Y.
Subject: Enrollment in the Officer's Reserve Corps.

What are the requirements for admission and enrollment in the Officer's Reserve Corps?

John Jones.

Full notes on correspondence can be purchased from the Military Training Camps Association.

Recruiting.—Recruiting is conducted by an officer for each regiment, post, or detachment; an officer detached to make enlistments; officers detailed on recruiting service. Recruiting officers must be detailed pursuant to orders or regulations of the War Department, otherwise the enlistments are illegal.

Indebtedness to Post Exchange.—The indebtedness of a soldier to the post exchange is noted on pay roll for next succeeding month, and deducted from his pay by the quartermaster and turned over to the post exchange officer, who receipts therefor to the quartermaster and the soldier.

Rations.—A ration is the allowance for the subsistence of one person for one day. The kinds of rations are: garrison, haversack, travel, Filipino, and emergency.

Garrison rations are issued wherever practicable.

Haversack rations are issued beyond the advance depots in campaign.

Travel rations are issued to troops otherwise than by marching, and separated from cooking facilities.

Filipino rations are for Filipino scouts only.

Emergency rations are for troops in active campaign in emergency only, or in the field for instruction.

The cost of the ration is based upon the actual cost to the Government of the articles and quantities which constitute a ration.

Ration returns are made out giving the number of rations required for the number of men in the company for a certain number of days.

Instructions for changes in strength of company to be made in ration returns will be found in the morning report blank forms.

The following articles are not a part of the ration and are called extra issues: candles, matches, soap, toilet paper, rock salt, vinegar, ice, flour.

The company commander signs and the commanding officer approves the ration returns before the rations are issued.

From the ration return the quartermaster is able to determine the money credit due the company. Against this money credit the company draws articles of subsistence. Any overdraft is paid for in cash by company commander from the company fund. Any undrawn balance is paid in cash to the company commander, and becomes part of the company fund, and is available for mess only.

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Deposits.—In amounts not less than five dollars a soldier on active duty may deposit his savings to remain until the end of his enlistment or his furlough to the reserve.

Company commanders keep records of deposits on the men's descriptive lists. Deposits are made at the time of monthly payments.

Deposits and interest are forfeited by desertion, but cannot be ordered forfeited by a court martial. They are exempt from liability for indebtedness to private individuals; but not so. exempt for indebtedness to the United States.

Forfeitures and Deductions.—Forfeitures are stoppages of all or part of the pay of officers or soldiers and are the results of court-martial sentences.

Deductions are authorized stoppages against the pay of officers or soldiers by reason of indebtedness to the United States, and other agencies of the Government.

Forfeitures are disciplinary measures, and deductions or stoppages are administrative measures.

Pay of Deserters.—Soldiers charged with desertion will not draw pay until restoration to duty with or without trial. If tried and sentenced, payment will depend upon sentence.

Pay and allowances due at date of desertion are forfeited and may be used to satisfy authorized stoppages that were due at date of desertion.

No settlement of the pay account of a soldier will be made until there be sufficient sum for the satisfying of all stoppages, leaving a balance for the soldier.

Reward for Apprehension of Deserters.—A reward of fifty dollars will be paid to any civil officer or civilian for the apprehension and delivery of a deserter from the military service or an escaped military prisoner. This reward must cover all expenses and inconveniences incurred in the apprehension and delivery.

Muster Rolls.—Muster rolls are made out by company commanders at the end of February and every second month thereafter. They contain the names of members of the organization, data affecting their status, and nature of service performed.

Pay Rolls.—(Made out in triplicate). These are rolls of the company upon which payment is made. They are usually made monthly when circumstances permit monthly payment of troops. The rolls contain all data necessary for the proper payment of the men. All items affecting the pay of the soldier are entered. The amount due the soldier is filled in by the quartermaster who is to make the payment.

Gratuitous Issues.—In certain cases articles such as chevrons, recruit's toilet kits, identification tags and tape, etc., are issued to the soldier as are the articles of clothing. The value of the articles so gratuitously issued is noted upon the soldier's descriptive list but will not be charged against his clothing allowance.

Other Issues.—The more expensive articles such as overcoats, sweaters, blankets, ponchos, slickers and oilskins, etc., which can be returned by the soldier to be cleaned and repaired for further use, are issued to the company commander upon memorandum receipt, who in turn issues them to the men of his company in the same manner as the articles of equipment. No charge is made against the soldier for these articles unless he loses or, through carelessness, damages them.

Giving Information for Claims.—Information which could be made the basis of claims against the Government shall be given only to proper officials of Departments, when directed to do so by proper authority.

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Information concerning the sick and wounded may be given to their friends. If death is imminent, the immediate commander will notify the nearest relative. The fact of death may be communicated to relatives, but not the attendant circumstances.

Final Statements.—Final statements are the final accounts of a soldier at the expiration of his service, and contain name and rank of soldier, place of acceptance for enlistment, date of enlistment, date of discharge or furlough to reserve, reason of discharge, enlistment period he is serving in, pay due soldier for various qualifications, reason for any detained pay, clothing undrawn, deposits, date of last payment, pay due the United States for lost articles or stoppages, remarks as to character of service, absences without leave, and other absences which affect his pay. Statement is signed by company commander.

On back of the statement is a list of the deposits made by the soldier.

Statements are made out in duplicate, except in case of death.

The quartermaster settles the final account of the soldier.

Clothing Allowance.—At the beginning of each fiscal year the War Department publishes in General Orders the money allowance for clothing.

Every six months the company office publishes the clothing account of each soldier, showing whether the soldier has overdrawn his account or has money credit.

Company commanders must see that soldiers do not draw more clothing than is due them or that can be covered by their next pay.

Soldiers should be court martialed and punished for unlawfully disposing of or damaging their clothing.

Procuring of Clothing.—A "bulk requisition" form is filled out with quantities and sizes of articles required. This issue is made quarterly in bulk to company commanders (Clothing may be drawn for individuals at other times).

The company commander issues the clothing to his soldiers who sign receipts therefor.

The cost of articles issued to each man is entered upon his descriptive list.

When necessary, individual issues of clothing are made by the Quartermaster to soldiers upon the individual clothing slip.

Issue of Ordnance to Companies.—An ordnance requisition is made out giving quantity and kinds of articles as indicated in the "Unit Accountability Manual."

The proper supply officer will supply such quantities as he has on hand and give a credit sheet for articles he could not furnish.

The company commander will then fill out the "return of unit equipment" which is rendered semi-annually to the Chief of Ordnance.

Punishments.—Punishments must conform to the law and follow the acts as soon as practicable.

Commanding officers will endeavor to maintain discipline by admonitions, withholding of privileges, and other minor punishments to avoid recourse to trial by court-martial. In any case the right to trial by court-martial must be made known to the offender.

Punishment by flogging, branding, marking, or tattooing, is prohibited by statute.

Carrying a loaded knapsack, wearing irons, shaving the head, placarding, pillory, stocks, and tying up by the thumbs are prohibited by custom and regulation.

The imposition of any military duty as punishment is forbidden.

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NATIONAL SERVICE

March 1917

Shall We Suffer the Fate of China? . . . Theodore Roosevelt

The American Plan for Universal Military Training } { Major George Van Horn Moseley, Edward Harding, and John T. Pratt

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NATIONAL SERVICE

March, 1917

EDITORIALS

THE CHAMBERLAIN BILL

THE introduction of the Chamberlain universal training and service bill with the favorable report of the Senate Committee on Military Affairs marks a long step forward. The progress of the movement for national service has been hampered by lack of definition. Moreover, the wide misconception as to the meaning of universal service has been largely due to the lack of legislative proposals.

The Chamberlain bill follows generally the principles outlined in the first issue of this journal. It provides complete equality of obligation by placing the obligation to train on all who are physically fit. It cuts economic disturbance to the minimum by requiring the training only of men of nineteen, and by eliminating successive periods. It contemplates continuous outdoor work in the field and thus avoids the disadvantages of barracks life. It includes the vital principle of exclusive Federal control. It provides equal opportunities to become officers and thus safeguards against the encroachment of militarism through the insidious development of a pampered officers' caste. A controversy will ensue as to the sufficiency of the single six months' period of training. We believe, however, that in this time good results can be accomplished. It is largely a question of method and the development of skilled instructors. One of the best features of the bill is its assignment of practically all questions of administration and organization to executive regulation.

In our judgment the plan is at once moderate and effective. It will have our support in its main features.

Senator Chamberlain is entitled to great credit for this measure. While others have advocated principles in general terms, he has produced a concrete and workable plan. We need have no illusions about its early acceptance, but a great advance will be made in the discussion of the bill. It will stand the test of debate.

THE CHOICE

FACED with the possibility of participation in the greatest war in history, it becomes essential to take stock of our resources and to formulate a plan for an immediate situation. It is not conceivable that without a

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definite settlement of pending issues with Germany we can long continue to drift without larger land forces whether or not actual war ensues. Common prudence must demand the organization of a substantial number of trained troops. On this premise the all-important question is that of method.

Broadly speaking, either of two lines can be followed. Shall we once more experiment with volunteers—with the uncertainty, the maximum of economic disturbance, the injustice to the individual, the comparative ineffectiveness involved in such a method? Or shall we once for all resolve to face the facts, determine to solve the problem on effective, equitable, and permanent lines by adopting the principle of equal obligation? It is a momentous choice.

Heretofore discussions of national service have proceeded on the idea of training annual contingents each year, of passing them into an organized reserve, and of ultimately having enough trained reservists to form a national defense army. Assuming that we train 500,000 young men a year, and allowing for losses after training, we should have a reserve army of about a million and a half at the end of the fourth year, and after ten or eleven years we should be able to mobilize double that force. We have had in mind the gradual preparation of an army that would not fully materialize until some time in the future. But does this plan meet the present requirements?

The existing military situation may be stated as follows: The greatest war in the history of the world is in progress and is apparently approaching its crisis. What its issue may be, no man can foresee. It may end this year, it may continue into or beyond 1918. At its conclusion the world will be forced to face new and serious problems of readjustment. We have kept out of this war, but we have seriously felt its influence. Recently, circumstances have been such that it has been necessary for us to sever diplomatic relations with one of the belligerents, the most powerful and most highly organized military nation in the world.

The war may come to a close without active participation on our part. It may, however, demand of us an active participation in some foreign theatre of war before peace can be restored. Such is the uncertainty of world events that it may even call upon us to maintain a defensive attitude upon or within our own territory during or soon after the war.

Our present military capacity, measured by existing military conditions, is negligible. The Central Powers have some 10,000,000 men under arms. The other belligerent group has substantially more than that number. We have, besides our Navy, a mobile force of from 40,000 to 50,000 regular troops and a partially trained National Guard force with a present strength of about 150,000. With this force it is obvious that we would have no weight or influence in any existing theatre of war, and little power of defense if the war should flow into our own area.

What we ought to have in order to meet this situation is an organized and trained national army of at least 1,000,000 men capable of expansion to even greater dimensions, if necessary. This force we have not, and this force we should organize at once. Having organized it, the question of future preparation will be met simply by training new annual contingents. But in order to have military resources in time to meet emergencies within the bounds of immediate possibilities, we must think of the main force first and leave the question of annual contingents to the future.

We should form a national army without delay and should train the greatest number of men that we can

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effectively train with our existing resources. We may need this force for actual war. If the war passes without our needing it, it will have justified its cost in preparing us against the danger of war in the remoter future, provided we maintain its military organization as a permanent institution after the force is disbanded.

Assuming that it is our national duty to prepare on a large scale, on what specific plan should we proceed? Can we meet the situation by expanding our present Regular Army? Obviously this is impossible. Can we meet the situation by still further expanding our Organized Militia? This, too, would be an impracticable measure. In order to form a great national army we must do as all other nations have done. We must form a territorial army under a decentralized but exclusively Federal system of administration, and in every part of the country we must begin to develop all our military resources. In order to train the great forces required we should use all our present trained personnel that can be spared from the Regular Army, the National Guard, and all other sources as instructors for the new force.

If we are to proceed according to the principles of modern military organization we must definitely plan the form that our army should take when organized. An army of a million men would comprise about thirty divisions such as that prescribed in our Field Service Regulations, with certain additional auxiliaries necessary in order to combine groups of divisions as army corps or field armies. Having decided upon thirty divisions, the next step on modern military principles would be to divide the country into thirty regions of approximately equal population, with the idea of forming a division in each of these regions. A competent division commander and staff should be assigned to each of these divisions and each such commander should be given the authority and the means to raise a division within the area assigned him. He should be given as many regular officers and trained regular enlisted men as can be spared; and all the available National Guard personnel within his area should be assigned to him. These should form the nucleus of his officer and non-commissioned corps, and he should supplement it by accepting volunteers from all classes who have already had military training. For this purpose he would have former officers and enlisted men of the Army and the Navy, former members of the National Guard, graduates of military schools and colleges, members of the Federal Training Camps, and others who have had some military experience and training. With this initially trained personnel the division commander should start the enrollment and the organization of the units proper for his command, and in doing this he should be the fully qualified agent of the Government to do everything that is necessary in order to develop the military resources of the region assigned him.

The private soldiers of these forces should be the young men of the country. In order to insure their attendance in sufficient numbers at the start and during the continuance of war, we cannot and should not depend upon the volunteer system. We should determine what number of soldiers is required and we should draw them from the unmarried men of 19, 20, and 21 years of age.

If we should train a national army according to a broad, national plan of this character, by the end of 1917, from being a nation of negligible military power we will have become a nation well started in the way of military

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organization and with an expansible system adapted to future requirements. If war should be our fate we would be as well prepared as could be expected to meet the situation, and if peace should come without military activity on our part we could disband the force, feeling that we had laid the foundations for a just and effective permanent system. We would have a modern military organization. We would have a million citizens prepared for future mobilization; we would have trained an officer corps adequate to handle such a force; we would have effected a system of military administration and supply, and our future plans would be based upon meeting the requirements of a particular organized force. From this force, raised primarily to meet an emergency, we would be able to draw trained instructors for the national army of the future, and by training a new class of recruits each year we would perpetuate the emergency army, expand it, and make it a permanent institution.

The formation of a real national army at this time is nothing more than a reasonable precaution. In forming it we should apply the principle of universal liability to military service. If we organize it upon correct lines we would thus make a necessary emergency measure the basis of permanent security.

VOLUNTEERS AND PAY

ONE of the most disturbing but inevitable features in the evolution of the volunteer system is its tendency to become identical with a purely mercenary system. This tendency grows apace. The Militia Pay Bill is merely its first application on a large scale to non-professional soldiers. It is inherent in the volunteer plan, and nothing is to blame for it but the system itself. If we are to ask the 150,000 men who compose the National Guard to hold themselves ready for first-line service in case of war or for patrol and police duty in time of peace, it is not they who are to be blamed for expecting substantial remuneration from their fellow-citizens for undertaking this task. The more that we require of these men the more the Nation must be prepared to pay them.

The condemnation of pay for the militia has often missed its mark. It is by no means the men of the militia who are at fault. The trouble lies in tolerating a state of affairs under which it is necessary to bid for the military service of citizens in competition with the rewards of commercial life.

Only let us not delude ourselves into thinking that by calling our organized volunteer forces citizen soldiers we can avoid a mercenary system. That is inevitably what it tends to become just so long as we proceed upon the theory that military service is something to be bought and paid for rather than a normal duty of citizenship.

THE NATIONAL GUARD ARTICULATE

THE most authoritative critics of the volunteer system are those who are rendering service in the militia and who, through personal experience, most keenly realize the hardships and inequalities imposed upon the slim fraction of citizens who bear our military burden. Since the mobilization at the Mexican border national guardsmen throughout the country have urged the adoption of a system of equal military service to replace the present unjust plan. They desire to prevent a repetition on a much greater scale of the wicked state of af-

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fairs last June, when a comparatively few men were compelled to leave their business and dependent families to perform a duty that should have fallen to others as well.

An important movement in this direction was begun at a recent meeting of present and former members of the National Guard in New York City. It was pointed out that a mere handful of men had been called, at great personal sacrifice, to patrol bridges and aqueducts while hundreds of thousands of able-bodied men went about their daily tasks entirely unaffected. The meeting adopted resolutions in favor of universal military training and service under exclusive Federal control for all male citizens of the United States of suitable age. It was emphasized that, under such a system, active service short of war—such as the recent militia mobilization on the Rio Grande and the guarding of Government property during a threatened crisis—would be assumed by the youngest classes who, having the fewest economic ties, are best fitted to render it. A committee was appointed to form an organization and to take the necessary steps to make these resolutions effective. Let the National Guard of each state in the Union do likewise, and let no misdirected officials limit their freedom of speech.

RECENT CONVERTS

THERE is nothing to be said for universal training and service now that could not have been said with equal force two years ago. It is only that the logic of events has compelled the facing of actualities.

Confronted with the concrete problem as to how land forces ought to be raised, many who have been prone to avoid the issue have united on the common ground of equal obligation. A few of these changes of view are worth noting.

Not long ago *The New Republic* magazine had occasion to advocate attempts to bolster up the volunteer system and ventured the rather sweeping assertion that "no one has demonstrated that one million men could not be raised under a voluntary system" in time of peace. But in an extremely able analysis of the situation on February 10th, we find it stated that "recruiting in the present condition of the labor market would be almost impossible without a campaign of manufactured hatred, which would distract the Nation. Reluctantly, therefore, we suggest the adoption of compulsory training for certain age classes." The suggestion is not a new one, but the acceptance of reality by a journal which has relied too confidently on the volunteer system is significant.

Of equal interest is the unequivocal position taken by the New York *World* on the introduction of Senator Chamberlain's bill. It characterizes the reliance "upon hastily organized volunteer armies" as "suicidal folly" and supports the Chamberlain bill in every respect.

These are merely examples of an almost unanimous expression from thinking men from all parts of the country and all shades of political opinion. It remains to be seen how long Congress will ignore the vast body of informed opinion now demanding a solution of the military problem.

OWING to the pressure of official work, Major Palmer has been unable to complete the second instalment of "An Army of the People." It will appear as soon as circumstances permit.

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SHALL WE SUFFER *the* FATE *of* CHINA?

By THEODORE ROOSEVELT

[*This was written in January, prior to the breaking of relations with Germany.*]

THE two vital needs of this country are thoroughgoing Americanism and thoroughgoing preparedness. In other words, before we try to see what should be done inside the Nation, we ought to be sure that we have a Nation, and be sure we are able to protect it from outside aggression, and there is no use in a halfway course in either case. There is no room in this country for a 50-50 allegiance, divided between the United States and some foreign nation. Neither is there any use of preparing a little but not much. The worst enemies of real preparedness are not the out-and-out, peace-at-any-price, professional pacificists, for these are such a foolish folk that they cannot do lasting harm. The worst enemies are the advocates of a sham preparedness and a make-believe preparedness. The best example is offered by the mischievous and thoroughly unpatriotic Hay Military Bill, at the last session of Congress—a bill which represents flint-lock legislation of the worst type.

First and foremost we need a professional and thoroughly efficient Navy. Our Navy should be second only to that of Great Britain. I do not advocate its being made as large as the British Navy, simply because Britain's naval needs are even more vital than ours, just as Germany's military needs are more vital than ours. There is no need to rival in size the British Navy, any more than to rival in size the German Army; but in point of efficiency, body for body, our Navy should strive to surpass the British Navy, and our Army should strive to surpass the German Army. We do not need a large Regular Army. One of a quarter of a million men will do. But this Army, as well as our Navy, should be manœuvred en masse continually in time of peace, so that it would be able to act with the highest efficiency instantly at the outbreak of war. We should have a general staff both for the Army and for the Navy, and both should be under military management. Above all, our people should insist that there be no failure to keep the War and Navy Departments up to the highest standards *in time of peace.*

But a big professional navy and a small professional army are not enough. They represent our first and most elementary needs, but not our only nor, indeed, our chief needs. We are utterly unprepared for war in every way, and have gone backward, not only relatively toward other nations, but positively, during the last few years. Our rate of ship construction is so slow that it will be years before the additions, for which at last the appropriations have been made by Congress, will become effective. The shortage of men is continually growing.

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We cannot get a sufficient number of recruits for either the Army or the Navy. In consequence the recent increases in the Army and Navy have remained increases on paper only. For the Army we should have a short term of service and a high rate of pay. For the Navy even more thoroughgoing action is probably necessary.

However, to trust only to the Regular Army and Navy is unworthy of men who call themselves free men and live in a democracy. Such a policy is merely a policy of "let the other fellow to it." The only real solution of our difficulties is universal military training for our young men, and in time of war universal service of every able-bodied man or woman, in that position in which he or she can do most for the Nation. At the age of nineteen all our young men should receive six months' training in the field with the colors, except those who elect for a similar service on the high seas with the Fleet. Thereafter, for several years, they should be required to give up a couple of weeks each year to such service, and there should have been two or three years' preliminary training in the schools. Among the men who have seen this service those who have done best should be given the chance for two years' education somewhat on the line of the education given at West Point and Annapolis, but less severe and thorough. These men would become the officers of the citizens' army and they could be required to pay for the free higher education thus given by service every summer for some years in training the recruits of the year. The education that they received would give them an immense start in earning their own livelihood, and therefore would be a prize held up to the ambitious and energetic.

Arrangements could be made by which men who were willing to serve for a year, or two years, in the Regular Army or Navy, when they reach the age of nineteen, would be paid well for it, and would be excused from the ordinary training; and at the same time they could be given a certain amount of mental, as well as physical, training, which would increase their value to the community as citizens, and would increase their value to themselves as industrial units by enabling them from the outset to command more money in wages and salaries. Moreover, among the good men who finished their six months' course, and who desired to try for officers, a year's service as enlisted men in the Army or Navy should be accepted in lieu of the first year's service in the schools for officers. In these two ways, as well as by volunteers from among the men who desired further military experience, it doubtless would be possible to keep the Regular Army and Navy up to the highest point of numbers.

Of course, with the individual military training there must go industrial preparedness, by encouragement and supervision, on the part of the Government, of every industry which could be useful in time of war. The industries should be kept ready to render service immediately upon the outbreak of war. The railroads of the country, and indeed the transportation generally, should be handled at all times with the idea that the Government would immediately control it and if necessary take possession of it in the event of war. All munition plants, automobile factories, and the like, should be continually exercised by sample orders. Expert workers should be card-catalogued, so that the Government would know exactly what to do with its men wherever the need arose; and in all workshops,

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and in such matters as aviation and transportation by train or automobile, women should be given the chance in time of war to replace the men who ought to go to the front, in the fighting line, into the position of danger. It should be understood clearly that in time of war the Government would regulate every business in the interest of the Nation as a whole, and would tolerate no practice inconsistent with the welfare of the Nation and the success of the war, permitting neither excessive profit-making on the part of employers nor abuses by employers, nor strikes on the parts of employees, so long as the war lasted.

The Nation cannot too soon begin this work. It would be impossible to have such a scheme function, with entire efficiency, within less than three or four years, even although we now entered into the project with zeal and heartiness. It was our bounden duty to have entered on such a course three years ago, when the Mexican situation became acute; while our folly was inexcusable, when, two and a half years ago, after the outbreak of the Great War, we failed to begin the work of radical and thoroughgoing preparedness.

Such preparedness as that herein advocated would be of incalculable benefit to this Nation from every standpoint. Its benefits would be as great from the standpoint of securing social justice and industrial efficiency in time of peace as in safeguarding our honor and vital national interests in time of war. It would democratize our young men. The sons of the multimillionaires would live in the same dog-tents, eat the same food, go on the same hikes, perform the same duties as the sons of the wage-worker and the farmer. No man could, by the use of money, excuse himself from actual bodily service. No man born abroad should be entitled to vote until he had undergone such a preparedness for service—and personally I believe that the right to vote should be permitted only to those who acknowledge the duty of bearing arms in defense of the Nation when the Nation needs their services, and who accordingly train themselves for the proper performance of this duty; or who, if women, fit themselves to render equal service along other lines.

The young men who went through such training would learn habits of self-help and self-reliance, and would also acquire the power of acting with others for a common end. They would learn to be alert, resourceful, and able to command and to obey. They would learn the value of cleanliness, self-respect, and respect for others. Men who had seen such training would be immensely more able to join together in after-life for the great collective tasks which the community must collectively perform—and of these great collective tasks the greatest is, where possible, with caution and wisdom to encourage the tendency to make the tool-users the tool-owners, who themselves recognize the need of ample reward in honor and pay for the indispensably necessary leadership. Yet their power of individual initiative and action would be increased and not diminished.

Let it be remembered always that the preparedness I advocate would not bring on war, but on the contrary would tend to avert it. Such an army as that herein spoken of could never be used as an instrument of aggression, but would enable us to provide effectively for our own defense. As soon as our people get thinking in terms of preparedness, we shall insist on ample munition factories in the interior of the country, where

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they would not be exposed to raids. When that day comes we shall insist on such action by our Government as will secure our national self-respect and the safety of our citizens abroad. This would diminish, not increase, the chances of war with foreign nations! Preparedness of the type herein championed would not insure us completely against war. But it would make it less likely that war would come; it would insure the proper distribution of the burden of war among all our people; and it would immensely increase the likelihood that, if ever we are forced into war, we shall be able successfully to defend our honor and our vital interests.

When the present Great War is over, there will be an immense revival of pacifist talk and agitation. All the pacifists will again begin to scream against preparedness, and will again bring forward their various quack nostrums against war. If they have their way they will make us the China of the Occident; and surely in the end we shall suffer the fate of China. More than anything else this Nation needs far-sighted preparedness in advance; preparedness both spiritual and material; preparedness so that in time of peace we shall secure social and industrial justice and efficiency; military preparedness, so that in time of war we shall be able to guard our own hearthstones.

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The AMERICAN PLAN *for* UNIVERSAL MILITARY TRAINING

The Chamberlain Bill (S. 1695)

A SUMMARY OF ITS VARIOUS PROVISIONS AND NOTES THEREON

By MAJOR GEORGE VAN HORN MOSELEY, U. S. A., EDWARD HARDING, AND JOHN T. PRATT

(Major George Van Horn Moseley, of the United States Army, and Messrs. Edward Harding and John T. Pratt, of the New York Bar, assisted Senator Chamberlain in the preparation of the Chamberlain Bill (S. 1695), reported out of the Committee on Military Affairs of the Senate on February 10, 1917, and now before the Senate. Major Moseley was, in 1916, a member of the Army War College and an officer of the General Staff stationed in Washington, D. C., and had, until recently, been Chief of Staff of the Pennsylvania Division on the Mexican border. Messrs. Harding and Pratt have done much valuable work in investigating existing military systems and formulating new plans for universal military training.

The Chamberlain Bill embodies a definite, well-considered scheme originated to fit American conditions. It will commend itself on account of the moderation and reasonableness of its provisions. The plan set out in the bill is a distinctive American Plan, and is not the Australian, Swiss, or Argentine system remodeled for this country.—THE EDITORS.)

ESSENTIALS OF PLAN

IN ANY system of universal military training there are three fundamental points to be considered:

(a) The length of time of training;

(b) The age for beginning the training; and

(c) Preliminary training.

(A) Intensive training over a considerable period of time is essential in order to obtain adequate results from a military standpoint.

The systems of military training in force in foreign countries before the present war resolve themselves into four classifications:

1. A period of continuous training for one year with no preceding or following training (The Chilean system).[1]

2. A period of continuous training lasting two years or more, followed by several recurring periods of much shorter duration. Credits of one year may be allowed to those who have completed an education equal roughly to our High School course (The German system).[2]

3. Seven yearly periods of 16 days each preceded by shorter periods of preliminary training (The Australian system).[3]

4. A period of continuous training

[1] The Statesman's Year Book, 1916, p. 778.

[2] Report of the Massachusetts Special Commission on Military Education and Reserve, December, 1915, p. 56.

[3] Idem pp. 52, 53.

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for 65 days or more preceded by voluntary training and followed by a number of shorter periods of training (The Swiss system).[1]

In theory, the longer the periods of training the better the results from a military standpoint. General Wood, however, has stated that six months of intensive training should develop an efficient citizen army in this country. Many other United States Army officers concur with him. The opinion of these authorities is the ground for the length of the period of intensive training set out in the bill. The period is as short as it is possible to make it and still satisfy the demands of these military experts.

(*B*) *Nineteen is the age for beginning intensive training.*

Expert military opinion is not entirely in accord as to the best age at which the period of intensive training should begin. The practice in foreign countries before the present war is helpful in considering this question. The age fixed in some of these countries was as follows:

Argentine Republic	20	years
Australia	19	"
France	20	"
Germany	20	"
Switzerland	20	"

In Switzerland, nearly all boys voluntarily enlist for military training between the ages of 16 and 20.

From a physical standpoint, the average man of nineteen is strong enough to undergo intensive training. At the present time men of eighteen are considered strong enough to be enlisted in the United States Army; even boys of sixteen are enlisted with their parents' consent.

From an economic standpoint, the man of nineteen is not as valuable as he is in later years. Men of nineteen are generally not married: if interruptions of family interests can be avoided, it will be better for the country.

There is considerable medical and military authority to the effect that nineteen is the youngest age at which men can be subjected to six months' training to the best advantage. In the Argentine Republic the ages of eighteen, nineteen, and twenty were tried under the provisions of successive acts. Under conditions in that country the age of twenty was finally found to give the best results. It should be noted that the difference between eighteen, nineteen, twenty, and twenty-one as the age of beginning the longer period of training is not particularly vital. To fix it at nineteen would, it is believed, result in less economic disturbance than to fix it at an older age. For college men the older age would make but little difference; but the average wage earner of twenty-one cannot give six months of his time as easily as he could have done during his nineteenth year.

(*C*) *Preliminary training accomplishes desired results from a military standpoint, serves to diminish the period of intensive training, and gives the country the benefit of earlier results in raising the standards of life of those trained.*

Provision is made in the bill whereby credits not exceeding three months may be allowed on the period of six months of intensive training. The satisfactory completion in any year of a preliminary course of instruction, approved by the Secretary of War or the Secretary of the Navy, is accepted to reduce by one month the period of intensive training, with the limitation

[1] Idem pp. 50, 51.
Proceedings of the Academy of Political Science, Vol. VI, No. 4, p. 109.

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that in no case shall such period be less than three months.

In these preliminary courses of training, the man will be taught military fundamentals which every soldier must know:

(a) Promptness, obedience, and mental alertness;
(b) Personal hygiene;
(c) The Manual of Arms and the formation and execution of drill regulations;
(d) Familiarity with the rifle and its use.

The study of the Manual of Arms, together with drills and rifle practice, familiarizes one with underlying military principles which render intensive training more effective.

The preliminary courses will be taken at an age when the principles involved can be easily grasped and when good habits are formed more readily than later in life.

It may be noted that the first fundamentals above mentioned have moral, physical, and social values in addition to their military worth. Promptness and obedience to superiors make for self-control and the development of character; personal hygiene makes for a healthy body and clean living. The earlier the man is trained to act promptly, to submit to authority, and to take care of himself physically, the better for him and for the country.

Preliminary training which shortens the period of intensive training is of economic value; men completing such courses while at school or college minimize the loss of time from productive industries and from family interests.

SECTION 1—LIABILITY TO BE TRAINED

Males (a) who are citizens, or (b) who have declared their intent to become citizens, shall undergo six months' military or naval training in the year in which they become nineteen or first come within above description if not then more than twenty-six. In the first year of the operation of the Act the training is for three months.

That every citizen should be subject to training when he reaches the age fixed is of the basis of any plan for universal training. But there are persons other than citizens who should be brought within the provisions of the Act. Those who are living in this country and have already made formal declaration of their intention to become citizens should be subject to the same training as citizens. The inclusion of the members of this class also follows well-established precedents: they were subject to the Civil War Draft (Act of March 3, 1863, 12 Stat. L. 731), and have been included as part of the militia in all the recent acts relating to that subject:

Act of Jan. 21, 1903, 32 Stat. L. 399;
Act of May 27, 1908, 35 Stat. L. 399;
Act of June 3, 1916, 39 Stat. L. 197.

The age limit at which liability to training ceases has been fixed at twenty-six. As a general rule it is not worth while to train a man unless he is afterward to be available in the Reserve for service for at least two years. As provided in Section 20, liability to such service ceases at the end of the year in which the man reaches the age of twenty-eight.

In order to permit the gradual development of the organization necessary to make the training most effective, provision has been made for a period of only three months' training during the first year of the operation of the Act. Probably the greatest difficulty at the outset will be the securing of a sufficient number of competent officers to act as instructors. This provision will permit the same

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number of instructors to train twice as many men during two three-month periods in the first year as they could train in one six-month period.

SECTION 2—CONTINUED LIABILITY TO TRAIN

In case any person liable to undergo training does not train in any year in which he is subject thereto, liability to undergo training continues up to the year in which he reaches twenty-six.

This provision that liability to train continues even though a person has avoided training and has been punished is thus drawn in order to insure that paying the penalty will not operate to secure an exemption.

SECTION 3—EXEMPTIONS

Members of permanent military or naval forces of the United States are exempt from training. Persons physically unfit for any military or naval service, and persons on whose earnings members of their families are dependent for support, are exempt from training unless the ground for exemption ceases before they attain to the age of twenty-six.

For both justice and efficiency, the number of exemptions has been reduced to a minimum.

One of the strongest arguments that can be advanced in favor of universal training and service is that it is at the same time most just and most democratic. As the experience of England during the past two and one half years has so clearly demonstrated, the volunteer system is the most unjust of all: under it the best and most capable of the Nation's youth (usually also the most heavily burdened with responsibilities) always bear the brunt of war. The greater the number of exemptions the more likely is universal training to partake of the evils of the volunteer system, to afford greater opportunity for favoritism and partiality, and to become less democratic.

Another strong point in favor of universal training is the great physical benefit to the men trained which, the experience of other countries shows, almost invariably results. As this is a benefit to the Nation as well as to the individual, it is to the interest of the Nation that exemptions be as few as possible.

From the standpoint of fairness to the individual and of efficient administration, it is equally advisable to make the exemptions as few as possible and to define them precisely. The early conscription laws in France were failures partly because of the too numerous exemptions. In Switzerland, where the exemptions are few and carefully set out in the law, the results have been eminently satisfactory.

Our own experience during the Civil War also bears witness to the inexpediency of too many exemptions. The original Draft Act of March 3, 1863 (12 Stat. L. 731), allowed a large number of exemptions, but before a year had passed the practical difficulties which arose in applying these exemptions caused the elimination of most of them (Act of February 24, 1864, 13 Stat. L. 8).

SECTION 4—TRAINING OF MEMBERS OF CERTAIN RELIGIOUS SECTS

Members of any religious sect now organized and existing whose creed forbids its members to bear arms in war are exempt from training in bearing arms, but not from training in non-combatant branches.

This exemption from training in the actual use of arms is accorded out of deference to the conscientious scruples of a small but much respected group of our citizens. The exemption provided for is substantially the same as that allowed during the Civil War by the

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Act of February 24, 1864 (13 Stat. L. 9), and during the present war by the British Act of January 27, 1916 (5 & 6 Geo. 5, ch. 104).

SECTION 5—CRIMINALS AND PERSONS OF BAD CHARACTER

Persons convicted of felony, or of notoriously bad character, are to be trained only in special units.

The fact must always be borne in mind that one of the surest results of universal training is the advancement of the young men subjected to it. Wherever possible, in order to improve or protect the physical or moral welfare of the men trained, provision to that effect has been made—as in this section by the provision for the separate training of men of bad character, contact with whom might prove demoralizing (See also Sections 39 and 40). It is to be noted that the influence of military training prevents much of the development of criminal tendencies due to the "gang" proclivities of youths who have not been taught to accept responsibility.

SECTION 6—CREDITS FOR MILITARY INSTRUCTION

Credits for approved instruction shall be allowed, but not to reduce the training period to less than three months.

The two primary purposes of the Act, the national defense and the improvement of the Nation's young men, may to some extent be accomplished by efficient training given in schools and colleges or other organizations, subject to the approval of the Secretary of War or the Secretary of the Navy. In recognition of this fact provision has been made to allow the substitution of such training, provided that the men subject to the Act receive not less than three months' actual training with the colors. In practice those who thus become entitled to a month's deduction for each of not more than three years of such training will probably receive even more training than those who have only the six months' training required by the Act; but it has been deemed expedient to require that they undergo at least three months' training with the colors in order that they may the more readily be worked into the organization of the Reserve Citizen Army or Navy.

SECTION 7—EXPENSES

All expenses of men in training are paid by the Government.

SECTION 8—TRAINING STRICTLY PERSONAL

No substitutes shall be accepted and exemption from training cannot be purchased.

For reasons that have already been pointed out above, it would not be consistent with the policy of the Act to permit the purchase of exemption from training either by providing a substitute or by the actual payment of money. The Draft Act of the Civil War provided for a money substitute ($300) or for supplying a personal substitute. These provisions were productive of the most severe criticism and censure.

SECTIONS 9, 10, 11, AND 12

9. ISSUANCE OF CERTIFICATE AND ROSETTE.

10. NATURALIZATION.

11. PERSONS WITHOUT CERTIFICATE INELIGIBLE TO CERTAIN EMPLOYMENTS.

12. EMPLOYMENT OF PERSON WITHOUT CERTIFICATE PROHIBITED.

Certificates of training or exemption are to be issued. Rosettes are to be issued showing the year's class to which the wearer belongs.

No person liable to training shall be naturalized unless he holds such a certificate or is at the time undergoing training.

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No person liable to be trained shall hold any position of trust or profit under the United States unless he has such a certificate.

No person shall employ a person up to the age of twenty-eight who is liable to training unless he has such a certificate.

These sections provide an important means of enforcing the Act. There is no system of registration in effect in the United States by which the authorities can keep a record of each individual or by which they can enforce his liability to train. The important consequences of having a certificate of training or of exemption, which result from these sections, will insure the appearance for registration and training of the men who are inclined to be "slackers" and will thus automatically enforce the Act.

SECTION 13—TRAINING DISTRICTS

The United States shall be divided into training districts. In each district at least one cantonment shall be established. As far as practicable such division shall include a single state or group of states.

The provision for the division of the country into training districts is an administrative one somewhat similar to that found in the original Civil War Draft Act of March 3, 1863 (12 Stat. L. 732).

It is planned to organize the Reserve Citizen Army on neighborhood lines in order to preserve the advantages of personal acquaintance and of local feeling, and in order that registration and mobilization be made convenient, prompt, and economical. The provision for the establishment of one or more cantonments for training purposes in each training district will insure, as far as possible, the training of each man near his home.

The term "cantonments" has been used to indicate as nearly as is possible in a single word the idea of camps in the open as contrasted with the old type of barracks at the permanent army posts. While it is not the purpose of the Act to compel the men while in training to undergo unnecessary inconveniences, it is part of its policy to encourage as far as possible outdoor life during the training period.

SECTION 14—REGISTRATION AND EXAMINATION

Every person liable to training shall be registered and shall submit to physical examination.

The requirements of this section are also administrative in their nature and are obviously necessary to the proper carrying out of the purposes of the Act.

SECTION 15—EXPRESSION OF PREFERENCE AS TO KIND AND TIME OF TRAINING

The President may require training in the Navy of any part of those liable to training. Every person may express his preference as to the kind of training and the time of year for training, which preference shall be considered as far as practicable.

The determination of the exact proportion of the entire number to be trained in the Army and in the Navy is from its very nature a matter which cannot be fixed in the law, as it will necessarily vary from year to year. Its determination may best be left to the President.

It is not intended to interfere with the convenience of the individual to any greater extent than is necessary. Although the needs of the service may not exactly correspond with the choice of the man, every man will be permitted to express his preference for training either in the Army or the Navy or in a particular arm or corps of either service, and consideration will be given to this preference as far as is practicable.

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A similar provision has been made for the expression of his preference as to the time of the year when it is most convenient for him to undergo training. While the training of the greater part will probably be in the summer time, it may always be necessary to train a certain number—particularly farmers—at other periods of the year. The preferences expressed will be considered whenever practicable.

SECTION 16—REGISTRATION DISTRICTS

Each training district shall be divided into a convenient number of registration districts.

SECTION 17—BOARD OF MEDICAL EXAMINERS

A Board of three Medical Examiners in each registration district shall be appointed. Its decision shall be final.

This provision is designed to make the greatest possible use of the medical officers already in the service of the United States and to obviate as far as possible the necessity of employing other physicians, with the resulting added expense. As a question of physical fitness is solely one of fact, there is no appeal permitted from the decision of this board.

SECTION 18—BOARD OF REGISTRATION

A Board of Registration in each registration district shall be appointed to hear applications for exemption and for training as non-combatants. The Board is given ample powers.

In this section provision has been made for the detailing of various officers and employees of the United States to serve as boards of registration without any additional expense for salaries. Under the Civil War Draft Act there was a Board of Enrollment, consisting of a provost-marshal and two civilian members, in each Congressional district. Each of the civilian members received the compensation of an assistant surgeon (Act of March 3, 1863, 12 Stat. L. 751). By the provisions of this section the possibility of extra expense for compensation will be avoided. These boards are given full power to determine all questions other than those of physical fitness. They are also given such powers to compel the attendance of witnesses and the giving of testimony as are necessary for the purpose and as ordinarily are conferred upon administrative boards.

SECTION 19—APPEALS

Appeals from the Board of Registration shall be to the District Court, whose decision shall be final.

This and the earlier section, which does not allow an appeal from the Board of Medical Examiners (which has before it the consideration only of the question of physical fitness), while allowing an appeal from the Board of Registration (which determines all other questions arising in regard to liability to undergo training), are far more liberal than the provisions of the Civil War Draft Act under which the decision of the Board of Enrollment upon every question was final (12 Stat. L. 734). It is not improbable that after the Act has been in operation for a few years the great benefits resulting to the individual from the few months' training required will come to be so well recognized that there will be few requests for exemption.

SECTION 20—RESERVE CITIZEN ARMY AND RESERVE CITIZEN NAVY

From time fixed for beginning of training to end of calendar year in which he becomes twenty-eight, every person trained shall be a member of the Reserve Citizen Army or Reserve Citizen Navy and of the class of the year when trained. Officers are not members of any class. Membership ceases under certain circumstances. While in training each member is subject

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to the Articles of War or Articles for the Government of the Navy. While in service he is subject to laws, orders, and regulations governing the Regular Army and Navy and is entitled to the pay and allowances of the Regular Army or Navy.

This section and Section 22 form the direct connection between universal training and the national defense. The Reserve Citizen Army and the Reserve Citizen Navy are created as a basis for mobilization in case of need, and their division into annual classes is for the same purpose. Unlike the National Guard, as we now know it, they will never be mobilized for drill or training after having completed their original six months' training, except perhaps for one day each year, as provided in Section 21. But unlike the unorganized militia as it has always existed in this country, a sufficient number of those upon whom the country must ultimately rely in case of need will always be trained and organized.

The existence of the organized and trained reserve of young men with few responsibilities for the support of others will make possible a great reduction in the age limit of liability for service under the existing militia laws. In the past, the age limit up to which a man is a member of the militia has always been forty-five years. From the beginning of our history under the Constitution all able-bodied male citizens between the ages of eighteen and forty-five have been included in the unorganized militia:

Act of May 8, 1792, 1 Stat. L. 271;
Act of Jan. 21, 1903, 32 Stat. L. 755;
Act of May 27, 1908, 35 Stat. L. 399;
Act of June 3, 1916, 39 Stat. L. 197.

In foreign countries the age limit is similar. In Switzerland a man does not pass out of the Third Line or Landsturm until the age of forty-eight; in Argentina he does not pass out of the Territorial Guard until he is forty-five.

With a trained and organized Reserve which can be relied upon, it becomes evident that in this country liability to service need not continue for so long a time. It is estimated that each year 500,000 young men will be trained and pass into the Reserve, where they will continue for nine years. Thus, at all times after the Act comes into full operation, there will be available approximately 4,000,000 men or more, and this with an age limit for the Reserve of twenty-eight instead of forty-five. Practically all authorities agree that this Reserve would be sufficiently large for demands that can conceivably be made upon it.

Two clauses of the provision relating to termination of membership in the Reserve supplement the provisions of Section 1, and among other things terminate the liability to service of any man who has been trained because he expected to become a citizen, but who later renounced his citizenship or his right to acquire it and permanently left the country.

SECTION 21

If so required by the President, all members of the Reserve Citizen Army or Reserve Citizen Navy must report for one day each year after completion of training.

SECTION 22—MOBILIZATION OF RESERVE CITIZEN ARMY AND RESERVE CITIZEN NAVY

The Reserve Citizen Army or Navy may be called to service in the event of defensive war or imminent danger thereof. They shall be called by classes, the youngest first. A part called shall be apportioned by states. The R. C. A. and R. C. N. shall not be used in strikes or other industrial disputes.

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SECTION 23—EXPENSES

All expenses of mobilization shall be paid by United States.

SECTIONS 24 AND 25

24—SERVICE STRICTLY PERSONAL.

25—RELIGIOUS SECTS.

No substitute shall be accepted and exemption from service cannot be purchased.

Religious sects. Members of any religious sect now organized and existing whose creed forbids its members to bear arms in war are exempt from service in bearing arms, but not from service in noncombatant branches.

These sections correspond with the provisions of Sections 4 and 8 in regard to training.

SECTION 26—MEMBERS OF THE REGULAR ARMY AND NAVY AS OFFICERS OF THE RESERVE CITIZEN ARMY AND RESERVE CITIZEN NAVY

Officers and enlisted men of the Regular Army or Navy may be commissioned as officers or warrant officers of the Reserve Citizen Army and Navy. Such commissions shall be in effect only when such officers are in active service with the R. C. A. or R. C. N. or employed for training under this Act. The officers shall be entitled to pay and allowances of their grades in the R. C. A. and R. C. N. while in active service. Their status in the Regular Army or Navy shall not be prejudiced.

The most difficult task in organizing a system for the annual training of 500,000 men will probably be to obtain a sufficient number of officers to act as instructors. The best plan available seems to be that of assigning Regular Army officers to offices of command and superintendence and to the other higher positions, and to assign non-commissioned officers and competent enlisted men from the Regular Army, together with such persons as may volunteer for service, as officers in the Reserve to take charge of the smaller units. Those in charge of such units will come in more direct contact with the men who are to be trained and will, to a great extent, be responsible for teaching them the rudiments of military knowledge. This section, relating to the assignment of Regular Army officers and enlisted men, and Sections 27, 28, and 29, relating to volunteer officers of the Reserve Citizen Army and Navy, have been drafted in contemplation of such a general plan.

The provisions of this section are supplemented by the provision of Section 32 that whenever necessary to make available sufficient officers for the purpose of this Act the President may, if the public safety so permits, suspend the organization of units of the Regular Army. The President is thus permitted to assign the officers and men who would otherwise be required for such units to duty in connection with training under this Act.

Volunteer officers can be appointed only after examination. In order to secure men properly trained when the law first goes into effect, only members of certain classes who have had some military experience are allowed to be candidates at the examinations. When the Act is in full effect, practically all volunteer officers will be men who have had training under the Act.

No favoritism can be shown, either in the original appointment or in promotions, which can be made only after examination.

The duties of volunteer officers are made as light as possible in order to attract candidates from the large group of men interested in military affairs who could not give up much of their time to the service. This limitation of the time spent by a volunteer officer in service is intended to secure democracy in the officers' corps.

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SECTION 27—VOLUNTEER OFFICERS

Volunteers passing examinations may be commissioned as officers in the Reserve Citizen Army and Reserve Citizen Navy.

There shall be admitted to such examinations:

(a) officers of the organized militia or naval reserve of any state or territory;

(b) members of the officers' reserve corps of the United States Army;

(c) men who have attended at least one army training camp or naval training cruise;

(d) men who have had at least two years' military training in a school or college approved by the Secretary of War, or at least two years' naval training in a school or college approved by the Secretary of the Navy;

(e) men who have had a period of training under this Act;

(f) other persons whose training has been approved by the Secretary of War or the Secretary of the Navy.

Such officers may be required to serve in training corps at least two months in each of three succeeding years. They shall be entitled to the pay and allowances of the same grades of the Regular Army and Navy.

SECTION 28—PROMOTION

The promotion and retirement of volunteer officers shall be made only under regulations prescribed by the President, provided promotions shall be made only after examinations.

SECTION 29—DISCHARGE

Discharge of volunteer officers may be made after hearing by an efficiency board and approved by the Secretary of War or the Secretary of the Navy of an unfavorable finding.

SECTION 30—ORGANIZATION OF RESERVE CITIZEN ARMY AND RESERVE CITIZEN NAVY

The organization of Reserve Citizen Army and Navy shall be made by the President.

The organization authorized by this section, taken in connection with the four preceding sections, contemplates the establishment of a complete organization, with officers for 1,000,000 men of the two youngest classes of the Reserve Citizen Army and Navy, who will act as a first line of defense, and a Reserve of junior officers to prepare for service classes subsequently called out. Consequently, on the call to service the whole administration of the Regular Army and Navy will not be thrown into confusion by unexpected details to take charge of the large number of new men brought into the service. Thus, Captain Smith of a certain company and regiment of the Regular Army will know that immediately upon mobilization he is to report for duty as colonel of a particular regiment of the Reserve Citizen Army. As this detail will be known long in advance, adequate provision can be made to fill his place in his regular regiment.

SECTION 31—COÖPERATION OF OTHER DEPARTMENTS

The President may use other departments and agencies of the United States for the purposes of the Act.

This section authorizes the use of the post office system for various purposes of registration, etc., the detail of medical officers from any department of the Government for service as medical examiners, and the detail of employees of any department from which they can be temporarily spared for various duties in connection with the administration of the Act.

SECTION 32—USE OF REGULAR ARMY AND NAVY

The President may use the personnel and equipment of Regular Army and Navy for the purposes of the Act. If necessary to secure officers he may suspend the organization of units of the Regular Army. Purchase of equipment or material shall be made as may be appropriated for by Congress.

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SECTION 33—GROUNDS

Secretary of War shall purchase or lease real estate and construct and maintain buildings or cantonments within the amounts appropriated therefor by Congress.

SECTION 34—NOTICES

Notices for registration, examination, report, enrollment, or muster into service shall be given by proclamation posted conspicuously in post offices and consular offices. No personal notice is necessary to bring any person within the provisions of this Act.

The duty to report for registration and examination will be universal for all the men of particular age at any time, so that all young men of that age will know about the time when they should appear. Those liable for training will also know the time when their training begins, so that the call to service will not be a surprise to the men affected. It seems possible, therefore, that notice of the time to appear for these various purposes may be fairly given merely by proclamation. Great expense and a vast amount of unnecessary clerical work will thus be saved.

SECTION 35—PENSIONS

All pension laws apply to members of Reserve Citizen Army or Navy while in training or service.

SECTION 36—LEAVE OF ABSENCE FOR GOVERNMENT EMPLOYEES

Leave of absence without pay shall be allowed for Government employees, during time they are undergoing training or reporting under this Act.

SECTION 37—EMPLOYEES NOT TO BE PREJUDICED

No employer shall prejudice or penalize employee because of training or of making annual report.

This section is modeled almost exactly after Section 134 of the Australian Act and is intended to prevent discrimination against men who are subject to training.

SECTION 38—FALSE REGISTRATION

False registration, false examination, etc., are forbidden.

SECTIONS 39 AND 40—INTOXICATING LIQUORS

No intoxicating liquor or tobacco shall be sold, supplied, or possessed at any military station, etc., being used at the time for training.

No intoxicating liquor shall be sold or supplied to any member of military or naval forces while in uniform.

SECTION 41—PENALTIES

Any violation of this Act is a misdemeanor and, if not punishable under Articles of War or Articles for Government of Navy, shall be punishable by a fine of not more than $1,000, imprisonment of not more than 12 months, or both.

The penalties of this section apply to all violations by persons not subject to training or service. They also apply to violations by persons subject to training or service committed by them at times other than those when, as provided in Section 20, they are directly subject to military or naval discipline.

SECTION 42—REGULATIONS

The President may make all regulations necessary for carrying out this Act.

A provision of this sort is necessary in every act which involves a large number of administrative details. It is almost impossible as well as unwise to attempt in a statute to make full provision as to such matters.

SECTION 43—TIME ACT GOES INTO EFFECT

The provisions relating to training shall take effect January 1st of the year following the passage of the Act.

SECTION 44—LAWS REPEALED

All inconsistent laws are repealed.

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SHELLS, MORE SHELLS, *and* STILL MORE SHELLS!

By Sydney Brooks

WHAT is the decisive factor in modern war? An Englishman who, in the light of British experience during the past thirty months, endeavors to answer that question, finds himself quickly revolving another and greater one: Is there any decisive factor in modern war? Probably there is not. War as it is waged to-day is the welding into a single thunderbolt of all the physical, spiritual, economic, industrial, and financial strength that a nation can command. It is no longer an affair of armies and navies merely, but of whole populations. It is no longer an arena in which, as on some university football field, the picked champions of either side struggle for mastery before a crowd of excited but non-participating spectators. Warfare of that type has ceased among the Great Powers. There are no spectators left when two countries nowadays hurl themselves against each other. Every one becomes a combatant of some sort. In all the belligerent lands at this moment the men who are actually under arms are but a fraction of the total fighting power. Behind them stand the men and women, even the boys and girls, whose activities along a thousand lines of effort support the forces at the front and who are just as much national assets and capable of being turned to account as the soldier in the trenches. Armies contend with armies, but in the rear there is going on a struggle, not less keen, between the scientists, metallurgists, chemists, engineers, and mechanics of the warring nations, between the administrative capacities of their respective governments, between the wealth and trade and staying-power, the moral stamina and nerve, of their peoples.

I have been told that a commission was appointed not long ago by a neutral government to draw up a list of articles that could by no possibility whatever be of military use. The commission reported that there was just one substance for which it could not discover a definite military value—and that was human hair! Only eight years ago all the chief Powers of the world put their heads together on the same problem. They advised that cotton, wool, rubber, and metallic ores should be placed on the non-contraband list on the ground that none of these articles was susceptible of use in war. That was in 1909, and to-day we are waging a war in which cotton, wool, rubber, and metallic ores are daily and hourly found to be military indispensables. So much for the foresight of the expert. So much, also, for those who imagine they can set any limits whatever upon the demands that war makes upon the resources of a nation. And in an enterprise of such tremendous and all-embracing range, who shall say that any single element is more vital to success than any other? I remember that Mr. Lloyd George in the early days of the present struggle declared

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that victory would rest with the Power that could lay on the table the last hundred millions sterling. But I doubt whether he would repeat that assertion to-day. It would be just as true to say that victory will rest with the Power that can put into the field the last hundred thousand men or manufacture the last million head of shell. Men are as useless without munitions as are munitions without men. But you may have both and still go down to defeat if you cannot maintain an uninterrupted supply of food. You may win on the battlefield and yet lose in the larder. Your armies may be victorious, but their victories are worth nothing if the spirit of the people at home is broken by privation, if the economic vitality of the nation is sapped by the cutting-off of its foreign trade, or if financial exhaustion makes it impossible to overcome the deficiencies of domestic production by purchases abroad. Every single item, indeed, that enters into the fabric of a nation's material strength is brought by war to its ultimate touchstone. And in addition its moral qualities, the resolution and steadfastness of its people, their cheerfulness under adversity, their capacity for self-sacrifice and for a fruitful unity of thought and action and feeling are tested in time of war by an ordeal that throws the nation collectively, and every individual in it, back upon their real selves and that leaves no secret source of weakness, whether of mind or character, unexplored.

Preparedness, then, in any true sense, is just as much a movement in favor of commercial efficiency, for instance, and a sounder political system, and better schools, and a higher average of informed and active citizenship, as it is a movement directed to purely military or naval ends. And if in this article I emphasize the manufacturing, the munitions, side of it, it is not because I am oblivious of, still less indifferent to, its other and equally vital aspects. It is partly because, while other aspects are equally important, none is more so than this. It is partly, also, because opinion in America, so far as I can judge, makes the mistake of thinking of armies in terms of men and navies in terms of ships, and not, as it should, of both branches of the national service in terms of munitions. We made very much the same error ourselves, in England, before the war. But we have learned better now. We have learned, and in a pretty severe school, what should have been tolerably obvious even before experience had driven it unforgetably into our consciousness, that armies cannot fight without weapons, and that raising an army, drilling it, and training it are far simpler processes that arming it. It is amazing—or it would be if the folly of governments had not long ago bereft one of the sense of wonder—how often this fundamental principle, this almost stupefying commonplace, of preparedness is overlooked. Men talk as though they had really accomplished something when they have federalized the National Guard or added to the numbers of the Regular Army or changed this or that feature of its organization, or voted a great increase in the appropriations for the navy. But what they have thereby achieved, if anything, amounts to very little, almost, indeed, to nothing, unless simultaneously they have taken steps to insure an ample supply of munitions. The men you can always get. At the call of the nation volunteers will always be forthcoming in abundance. But if it takes time to convert them into soldiers it takes far longer to furnish them with the all but infinitely variegated implements of modern war.

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Munitions are precisely one of those things that you cannot improvise. No Presidential summons will call a single big gun into existence; and the nation that persists in treating its army as a problem in numbers and in military organization, and that does not also see it as a problem in equipment and industrial production, is sooner or later bound to be caught at a disadvantage and will be exceedingly fortunate to escape a disaster.

Consider, for example, the position we in England found ourselves in in May, 1915, nine months after the outbreak of the war and when the establishment of the Ministry of Munitions had shown that we were at last awake to the supreme urgency of guns and shells. At that time Germany was turning out some 250,000 high explosive shells a day, about one hundred times as much as we were producing in Great Britain. She had begun the war with an immense preponderance of material over all the Allies combined. She had probably more machine guns alone than there were men in the original British Expeditionary Force which was landed in France. But besides this, in the first few weeks of the struggle, she occupied practically the whole of Belgium, one of the most intensely industrialized countries in Europe, and seized all its workshops, its tools, its coal and iron mines. In addition she captured and still holds the coalfields of northeastern France, the iron ore districts on the Lorraine frontier, and the great manufacturing city of Lille. The Pennsylvania of France was in the enemy's hands and worth more to him than many army corps. As against this, pretty nearly half of our British engineers and of our engineering resources were engaged on work for the navy and could not, of course, be switched off to anything else; while our manufacturing facilities for producing military material sufficed only for an army of a few hundred thousand. The problem before us was to expand these facilities at double-quick speed till they could equip an army of at least 5,000,000; and we had to solve this problem at a time when about a fourth of all the men engaged in the chemical and engineering trades had thrown up their jobs and enlisted.

When Mr. Lloyd George in the ninth month of the war was placed in charge of the newly established Ministry of Munitions, he found that practically all the firms doing Government work were behind on their contracts. They were short of machinery and they were short of labor. They had taken on far more business than they were capable of handling. Only about one fifth of the machinery engaged on Government work was used for night shifts. In other words, from three fourths to four fifths of the plant was not working full time or at full capacity. There was a great scarcity of machine-tools. It was constantly found that while shell bodies could be made in considerable quantities, some particular component —a fuse or a primer or a gauge—was most difficult to obtain and that the delivery of the completed shell, ready for the firing line, was delayed. Labor, again, had not at that time realized the war. It was still thinking more of the interests of its class than of victory. It was still more absorbed in maintaining the full rigor of trade union practices and customs than in fighting the Germans. Mr. Lloyd George declared in the House of Commons that the output of war material could easily be increased by 25 per cent. if only the workmen would suspend their normal regulations and methods for the duration of the war and would allow unskilled men to do skilled work.

These were only a few of the diffi-

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culties with which he had to contend. He met them, first, by gathering around him the best business brains of the kingdom; secondly, by issuing a call for munition volunteers whom he could dispatch wherever a firm was crippled by shortage of labor; thirdly, by arranging for the release from the army of the highly trained mechanics, many scores of thousands of whom had foolishly been permitted to enlist; fourthly, by building new Government factories under local boards of management; fifthly, by assuming control of the saloons in the munition areas; sixthly, by taking over the entire tool-making industry of the country; and finally, by urging the working men, personally and through their Parliamentary representatives, to take off their coats, drop all restrictions that diminished output, and work as they had never worked before. His policy, in other words, was to speed up all existing contracts and at the same time to seek out and develop new sources of supply. By taking a rapid census of all the machinery in the country, by expediting transportation on the railways and at the docks and by commandeering all the metals in the British Isles, Mr. Lloyd George was able in six months to raise the percentage of deliveries of high explosive shells—the only shells that can blast a way through the entanglements of trench warfare—from 16 per cent. of the promises to more than 80 per cent.

Naturally, the powers entrusted to the Minister of Munitions were of revolutionary scope. He could take over any firm or factory, whether it was engaged in making war material or not, and devote it to that sole purpose. He could order a manufacturer to build new shops and enlarge old ones, to scrap some of his machinery and instal the kind desired by the Government. He could demand from any corporation full details as to the number and class of workmen in its employ and the character and capacity of its plant. Strikes and lockouts were forbidden. Labor differences were automatically referred for settlement either to the Board of Trade or to the Munitions Tribunals—bodies consisting of two representatives of the men, two of the employers, and one Government representative—that were set up all over the Kingdom and invested with semi-judicial powers. Whenever the Ministry of Munitions took over a firm it became a "controlled establishment." In it all trade union rules, practices, and customs, not having the force of law, were suspended for the duration of the war. The workmen were obliged to comply with the regulations in regard to order, time-keeping, discipline, and efficiency that had been approved by the Ministry. As a counterpart to the restrictions thus imposed on Labor's normal freedom of action, Capital had to submit to a limitation of profits. The intention of the Act was that all profits earned in a "controlled establishment" above a reasonable standard should be annexed by the State. In practice this has roughly meant that a firm, working under the Ministry of Munitions, may retain the average profits it earned during the two years preceding the war, plus an additional 20 per cent. In other words, 80 per cent. of the excess profits, made as the result of the war, goes to the National Exchequer.

The State, however, does not guarantee that any profits will be made at all, nor does it make good any deficiency in that regard. If a firm, as often happens, earns less on its war-work than it earned in peace time, it has to bear the loss itself. In estimating the excess profits the officials of the Ministry of Munitions have access, of course, to all papers and accounts and

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are allowed to take into consideration increase of profit, the provision of new machinery or plant, alteration of capital, the exceptional wear and tear, and other similar matters. But, generally speaking, I think it may fairly be said that fully 80 per cent. of the war profits passes to the Treasury. No other arrangement could have eased the labor situation so effectually. The workmen in a "controlled establishment" know that they are working for their country and that it is not the employer but the nation that gains by their increased output. Diligence, regularity, an absence of friction, and a new-found interest and energy in their labor have been the fruits of this wise provision. It may, I think, safely be recommended to American adoption if and when the necessity arises. And in order to make the position perfectly clear, I will add that the owner or manager of a "controlled establishment" does not become in any sense an agent of the Government. The direction of the works remains in his hands and his legal rights and liabilities are unchanged, except in regard to the matters with which the Act specifically deals—the manufacture, namely, of the material of war; and in regard to them he submits to a limitation of profits and receives in return the assistance of the State in increasing his output to the highest possible figure.

By what measures of detail this arrangement is carried out, it would take too long to narrate. But some points have a more than momentary interest. It was soon discovered that the maximum production could not be reached without a thorough "dilution of labor." This uncanny phrase implies, first, that the employment of skilled men should be confined to work which cannot be efficiently performed by less skilled labor or by women; secondly, that women should be employed as far as practicable on all classes of work for which they are suitable; and thirdly, that semi-skilled and unskilled men should be employed on any work which does not necessitate the employment of skilled men and for which women are unsuitable. Now there is nothing on which British Trade Unionism has been more insistent than on the distinction between skilled and unskilled labor, and nothing, too, on which it has looked with more jealousy than the employment of women on men's work. "Dilution of labor" hit it, therefore, at its tenderest points; and it speaks well for the patriotism and good sense of the British workingmen that they accepted and accommodated themselves to principles and changes that must to them have seemed like the ending of their hard-won industrial liberties.

I need hardly say that all the ordinary questions that arise in the management of great industrial undertakings—questions of hours, of wages, of holidays, of overtime, and so on—have had to be dealt with by the Ministry of Munitions. And in addition they have had to handle all the special problems of the times, such as determining the priority of orders, issuing badges to the workers who were engaged on war-work, arranging for the housing of the many scores of thousands of men and women employed in the new national factories, issuing regulations that practically forbade an employer to engage a workman or a workman to leave an employer without official approval, providing canteens for the workmen, studying and reporting upon the special industrial diseases that sprung from the manufacture of explosives, instituting "welfare work" on a scale unparalleled in any other land, making provision for sickness and injury, examining the causes and cure of industrial fatigue and the proper

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ventilation and lighting of factories and workshops. It is hardly too much to say that these activities have converted the Ministry of Munitions into a sort of General Staff of British Industry, with immense potentialities for good after the war as well as during it.

Talk about German efficiency and German organization! I venture to say there has been nothing in Germany's conduct of the war that can compare with the miracle of industrial improvisation which has been wrought in Great Britain during the past two years. We faced what seemed an impossible task, and we have accomplished it. We have built the factories, we have made the tools, we have assembled the material, we have organized and trained the labor, we have turned the country into a vast arsenal of war with an output that would certainly make me, if I were a German, doubly anxious for peace. How has that gigantic work been accomplished? It has been accomplished by taking under Government control the entire engineering trade of the country, by commandeering all the machine tools, all the lathes, all the essential metals in the country, by building up an organizing staff composed, as I have said, of the very best business brains in Great Britain—men who have volunteered their services and who neither ask nor expect any reward whatever. It has been accomplished by forbidding or at least severely restricting the export of machinery, by discovering and tapping every available source of supply in the United States and Canada, by splitting Great Britain into districts and placing each district under the charge of the leading local manufacturers, and by enlisting firms that previously had never even dreamed of making war material. Makers of agricultural and textile machinery are at work on munitions; makers of lead pencils are turning out shrapnel; a sewing machine manufacturer is producing gauges; a gramophone factory is turning out fuses; a Court jeweller is engaged in the manufacture of optical instruments; a maker of cream separators has become a maker of primers; railway workshops, hitherto devoted to the building and repair of locomotives, have been given over to the construction of gun-carriages and field guns; four fifths of the energy of the companies normally occupied in manufacturing heating apparatus is now employed in turning out trench mortar bombs and hand grenades; boot and shoe factories are making shells and primers; in one district alone shell bodies or the components of shells are being made not only in engineering works, but in candy factories, by a music-roll manufacturer, by an infants' food maker, by a candle maker, by a flour miller, by a tobacco merchant, by an advertising agent, in several breweries, by some jobmasters, by a glazier, and by a syphon manufacturer; and warlike uses have been found on a prodigious scale for cotton-spinning works, for the manufacturers of gas engines and motor cars and even of brass-band instruments, locks and springs, arc lamps and boot polish. And, finally, Great Britain has been transformed into a war factory by simplifying patterns and specifications, by introducing everywhere the latest automatic machines, by having each component part of a shell manufactured as far as possible in a separate factory, and, above all, by training women and unskilled men to do the work that only skilled men used to be thought capable of.

All sorts of curious problems have cropped up in the course of this huge enterprise. One was the problem of chemical and optical glass. Without optical glass of the finest quality an

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army cannot be provided with gun-sights, range finders, periscopes, and telescope sights for the snipers' rifles. Without chemical glass, capable of standing a very high temperature, no explosives works can get along for even a single day. For both these vital purposes our home-made glass was all but useless. We depended on Germany for the best kind of optical glass and on Austria for chemical glass. What did the Government do? It first commandeered every ounce of the right sort of glass to be found in the British Isles. Then it ransacked America for more. Then it put the whole problem up to the men of science and told them to discover the formulæ and the methods of manufacture in use in Germany. The men of science retired to their laboratories and in a fortnight reappeared with all the necessary information.

There are several morals that might be drawn from that incident, and some of them, I dare say, would be applicable to America. But the one I should just like to emphasize in passing is that the most inventive and most highly trained brains in the kingdom have been placed freely at the disposal of the Government, have applied themselves as never before to the problems of manufacture; and that nothing since the introduction of the steam engine has so revolutionized, so renovated, sent such an invigorating stir through the whole of British industry, as this war. We shall emerge from it incomparably better equipped and more efficient for all industrial purposes than we were when it began. Science and business were never so closely allied, the mechanism of production was never so well organized, the relations between Capital and Labor were never so sympathetic as at this moment in Great Britain; and the same brains that saved the glass situation, that discovered an accurate way of taking the height of a Zeppelin, that kept whole trades going by a brilliant utilization of a waste product of nitric and sulphuric acid, that invented the "tanks," that ferreted out the secrets of the German dye industry, and that devised the most ingenious and successful instruments, something on the principle of an earthquake recorder, for locating the position of a gun—these same brains after the war will be at the service of British manufacturers and will make them rivals in every way worthy of the best American attention.

There are to-day in Great Britain more than 4,500 firms that before the war knew nothing of munitions and never dreamed of making them and that are now doing nothing else. About 100 colossal Government plants have been built. One third of these factories are national shell factories for the production of light and medium shell, organized and managed by local boards of directors. Of the remainder, 12 are national projectile factories manufacturing heavy shell, 16 are national filling factories and stations for loading gun and trench mortar ammunition and grenades, 2 are special fuse factories, 22 are explosives factories, and others are engaged in the production of cartridge cases, small arms ammunition, gauges, and tools. I have called them colossal. The 12 heavy shell factories cover an area of more than 200 acres; the 16 filling factories and stations, with more than 2,000 buildings, cover 2,400 acres; the 22 explosives factories cover more than 6,600 acres, one giant among them covering by itself more than 6,000 acres; and in addition 40 warehouses have been built for filled shells, etc, with a storage area of more than two million square feet.

Something like 3,500,000 people, of whom more than a million are women,

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are employed in munition-making. Women are engaged at this moment in more than 500 different munition processes, and more than 15,000 of them, thanks to the invention and ready adoption of innumerable automatic devices, manufacture heavy shells through all their stages. We are now turning out in eight days as much 18-pounder ammunition, in six days as much field howitzer ammunition, in a week as many medium-sized shells, and in four days as many heavy shells as we were turning out in the whole of the first year of the war. The enormous British Armies overseas up to last August—and it may be the same to-day—had been equipped with rifles and machine-guns solely from domestic sources. Every month we are manufacturing twice as many heavy guns as the entire Army possessed in May, 1915, the production having multiplied sixfold in the past year and being still rapidly on the increase. For every machine gun we were making twenty months ago we now make 17; for every 18-pounder we now make 43; for every pound of high explosives we now make 66; for every bomb we now make 40; and in spite of the expansion of output there has been no diminution but a very positive enhancement in the quality of workmanship. And all the time not only has the Navy been supplied with everything it needs—including a host of devices not hitherto employed in war—but the ordinary commercial exports of the country reached in 1916 a figure only once, and then very narrowly, exceeded in the most prosperous years of peace. That the magnitude of this effort may be the better understood I will just add that it takes nearly eight times as many workmen to equip a sailor as it takes to provide a soldier with all he needs in the way of munitions.

American manufacturers have had some little experience since the war began of the difficulties of munition-making. I have seen at first hand a good deal of the way in which they have met them. It is a record on the whole that is as creditable to the enterprise of American "captains of industry" as to the skill and intelligence and adaptability of American labor. Indeed, if I were asked to name the outstanding benefit which the war has conferred upon the United States I should point without hesitation to the Bethlehem Steel Company with its prodigious output of shells and guns, to the vast Remington factories at Bridgeport and Ilion, to the Du Pont powder works, and to the rifle, shell, and howitzer arsenals which the Baldwin Locomotive Company and the Midvale Steel Company have erected in and around Philadelphia, and to the Savage Arms Company near Utica, where the far-famed Lewis machine gun is being manufactured. The knowledge that has been amassed at these and similar plants, the men that have been trained, the machinery and the organization that have been got together, are national assets of enduring value. America knows to-day, or should know, the strong and the weak points of her industrial readiness for war. She has had, as it were, at Europe's expense, a dress rehearsal of the real thing; and when her hour of peril strikes she will be able to avail herself of an experience and equipment that will save her thousands of lives, heart-breaking months of delay, and the imminent risk of disaster. She will know how to set about the business with the least possible confusion. What we have had to learn in a costly school, and in almost hourly apprehension of a catastrophe, will be a familiar tale to her, if—but only if—she is wise enough to profit by her present opportunity.

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How big that "if" may be it is not for me to speculate. But I cannot help noticing that there are still Americans who either do not, even now, appreciate the importance of munitions in modern warfare or else allow it to be overweighed by fatuous prejudices against the big corporations. It was our English equivalents of those big corporations, it was our Bethlehems and Remingtons and Midvales and so on, that saved England in this war. But for them and their practical knowledge of the munitions business and their possession of highly efficient plants on which others could be built and from which others could expand, we should have been utterly lost. When I see an American Secretary of the Navy attacking one of the greatest munition firms in the United States or in the world and endeavoring to stir up public ill-will against it, I feel that there is a gap somewhere in American preparedness that ought to be filled. For the lessons of our British experience are very plain. They are that good and helpful relations in time of peace between the naval and military authorities on the one hand and the firms that manufacture munitions on the other are essential to the full and harmonious development of the nation's industrial resources in time of war. Encourage the private manufacturers as much as you can to keep their plants in a state of instant efficiency and responsiveness. Start Government arsenals, if you like, to regulate prices and maintain a healthy competition. But never forget that your main reliance must be placed on individual firms, that no Government factories can meet the demands of modern war, and that you might far better begin preparing for a struggle by disbanding half a dozen regiments and scuttling half a dozen dreadnaughts than by driving a single competent manufacturer out of the munitions business. These private companies are the backbone of national preparedness, and nothing could ever repay for weakening them or discouraging them.

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The FREEMAN'S CHOICE

By RALPH BARTON PERRY
(*Professor of Philosophy at Harvard University*)

I. WHY SHOULD A NATION BE ARMED?

IT IS a well recognized fact that a strong man makes enemies. Hence, except for the doubtful tactics of party politics, we do not esteem the man who has no enemies. We have reason to suspect that he lacks purpose and resolution. For in the world as it is, it is impossible to carry out any purpose resolutely without meeting and antagonizing somebody who is with equal resolution carrying out a conflicting purpose. It follows that the man who has no enemies must be either one who has no purpose, or one who, having a purpose, gives it up as soon as he meets with opposition. It is possible to avoid enmity either by being all things to all men, or by remaining at home in the hope of escaping attention. But this last course cannot be guaranteed to save one altogether from enmity, since it is always possible that somebody else may want your home and your services badly enough to come after them. In the last analysis there is only one way of avoiding enmity, and that is to lie down with muscles limp, and with the label, "Take One," pinned to one's person. And even then one will have made enemies of some, from the very refusal to make enemies of others.

This homely truth attaches to nations as well as to individuals. We of the United States may hope to avoid making enemies by remaining at home. We may snuggle down in our own continent, or in its innermost Mississippi valley, and carefully avoid raising ourselves above the sky-line. We may hold our national breath and lie ever so still in the hope that collectively mad Europe may not notice us. It won't work, as we shall see presently; partly, because the world is getting too crowded, and partly because we have valuable things that some one else is likely to want. However, supposing for the moment that it would work, let us see what it implies. If we expect other nations to let us alone, we must be willing to let them alone. But it is now evident, even to the most domestically-minded farmer of the Middle West, that we cannot *afford* to let other nations alone. We have given hostages to fortune in the shape of foreign trade. The whole economic system by which we supply ourselves with the necessities of life rests upon certain commercial privileges with which other nations can interfere, if we let them. The plain fact is that we must not let them. Indeed, the fact is so plain that we are generally agreed that even if domesticity was once our policy (as, in truth, it was not) it can at any rate be so no longer. For the sake of existence itself, we require an international policy. Such as it is, we already have one. And having an international policy means to some extent imposing our will on other nations; which means requiring them to do what they would

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otherwise not do; which means opposing and antagonizing them.

Now let us put the matter on those higher grounds which we are pleased to regard as more characteristically American. In his address to Congress on December 7, 1915, the President said: "We insist upon security in prosecuting our self-chosen lines of national development. We do more than that. We demand it also for others." We fought Spain for the sake of Cuba, and the Monroe policy is usually regarded as contrived to protect political liberty in South and Central America. We pride ourselves on the *benevolence* of our foreign policy. And in so far as it is benevolent, it is something to be proud of. But benevolence as well as self-interest makes enemies, and it makes more vindictive enemies. Spain did not like us better because we seized Cuba benevolently. On the contrary she hated us twice as much, once for our interference, and twice for our airs of superiority. The South resented the disapprobation of the North more than its violence. Germany would dislike us less if we wanted Belgium for ourselves. What she most bitterly resents is the imputation upon her character. The sting of our exclusion of the Japanese lies, not in its economic effect, but in the suspicion that we think ourselves a superior race. In short, he who attacks you benevolently is doubly your enemy; for he robs you of your reputation as well as your property, and hurts both your purse and your pride. Benevolence makes enemies even when, as in the case of our present attitude to certain European Powers, it is not effectively expressed. Simply making faces makes enemies; contemptuous enemies, perhaps, but nursing the motive of enmity against the time when it shall be worth while to ex- -it.

A benevolent foreign policy is impossible without arousing antagonism. There are, then, only two alternatives. A nation may cease to be benevolently interested in the fortunes of other nations. This is inconsistent with moral enlightenment—in short, humanly impossible. The only other alternative is to be prepared to meet and overcome those enmities which the benevolent nation inevitably incurs. If a nation's benevolence is a matter of policy, this implies the resolution to see it through. Sooner or later a benevolent policy is going to be also expedient; and then to carry out a benevolent purpose means forcibly to overcome those who seek to injure you because of your purpose. Which is only a long and roundabout name for *fighting*, for which the means *is armament.*

It is well to be perfectly clear that what has just been said about benevolent foreign policy applies with peculiar force to that policy which is regarded as the most benevolent of all, the policy, namely, of peace. There are nations, and there doubtless always will be nations, that don't want peace. They will be the enemies of any nation, or group of nations, that resolutely proposes to keep the peace. They will resent the lofty and humane purpose which animates such self-appointed guardians of the peace, because it will imply their own moral inferiority. The party of peace must be prepared to meet such enmity with its own weapons. The person who makes war selects the weapons. The policeman must carry a revolver if the lawbreaker carries one. And if war is to be prevented, and not merely put down or punished—that is, if there is to be security against war comparable to domestic security—then those whose business it is to guard the public peace must possess power impressively greater

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than that of any probable war-maker. When peaceful-mindedness, thus rooted in fear, at length becomes habit, the armament of peace may be correspondingly reduced.

All foreign policy, from the narrowest commercial interest to the broadest love of humanity, implies, then, the will and the means to contend against whatever enemies that policy will make. Diplomacy is the sensitive tentacle of policy. It enables one nation to discover what another nation's policy is, and how resolute that policy is. It permits of compromise, readjustment, and coöperation of policy. But behind diplomacy lies the real international force, which is what the nation is able and willing to *do* in behalf of its policy. A diplomatic representation is a promise to pay, which is valueless unless it is secured by the power to make it good. Diplomacy without power is like paper money without a gold deposit. When the day of maturity comes, the payer can only issue more paper, which rapidly depreciates to the point of worthlessness. To have a foreign policy, then, implies that one shall be equipped to meet the opposition which that policy will certainly encounter. The nation which stands behind its diplomacy, or acts on its policy, will have that policy taken account of by other nations. It will be an effective policy, having a real value in international exchange. It will make enemies, but it will also make friends. It will help to create that supernational force which all friends of a world-order hope may some day be exerted systematically to repress national lawlessness. To remonstrate, merely, to protest, disapprove, and criticise makes enemies; but it makes no friends, and it yields no fruits.

Now let us suppose that it were either desirable or possible for a nation like our own to have no foreign policy. There would still remain the contingency of national defense. We may hope that we are going to be overlooked. But as the world grows smaller year by year, that hope grows to be more vain. The sea is no longer a gulf, but a bridge. We have recently discovered, as though it were a novelty, that we have a frontier to the south. As a matter of fact we also have a frontier to the north. Whether we are liable to attack on our frontiers is not an academic question. We have been so attacked, as recently as last summer. It is an extraordinary thing that those promoters of peace who are most suspicious of militarism at home, and most fearful lest it shall grow and assert itself, are often most indifferent to its manifestations abroad. They appear to believe that while our own Army officers or advocates of preparedness are harboring dark designs of aggression, other countries are inhabited only by the harmless and humane. But recent events have proved that no country can consider itself safe from attack. It may either provoke attack by itself interfering with the affairs of other nations, in behalf of some principle or interest which it has made a matter of policy; as we have in fact provoked Germany to attack us. Or it may invite attack through its inability to defend something of its own which somebody else wants; as China and Belgium have invited attack.

From these considerations the need of armament follows as a matter of course, unless one deliberately adopts a policy of non-resistance. It is scarcely necessary to argue against that policy. What support it has is due for the most part to confusion of mind. Perhaps no one has ever seriously proposed non-resistance as a

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national policy. I hope so. For as a national policy it would mean that no individual should take measures to protect his family, his neighbors, or his institutions. It would amount to the policy of abandoning every principle in its hour of peril, excepting only the negative principle of refraining from violence upon the person of man. For every other principle could be put in peril by force. And it would imply the abandonment even of this principle except in its application to oneself. For it is possible, it is even common, that force should be used to constrain others to do violence; and a non-resistant could not consistently interfere. Consistent non-resistance would, of course, require the abandonment of force for the restraint of criminals, unless one were to be put in the ridiculous position of approving the use of force only upon one's own fellow-citizens, or upon individuals, while permitting alien or mass violence to take its course. Even so, there is apparently one thing that the non-resistant must still resist, namely, conscription. There is something to be said for the view that the maxim of non-resistance is: "Resist nothing but your military duty." Whether national non-resistance be absurd or not, in any case it is inglorious. It is essentially distinct in its motive and its moral meaning from a Christian willingness to receive violence upon one's own person rather than visit it upon another's. National non-resistance means a willingness to receive violence upon another's person. It means that when one's enemy smites one's cheek one is going to turn, not the other cheek, but the other man's cheek.

If, on such grounds, we may be permitted to set aside the alternative of non-resistance, and to conclude that the existence of enemies argues the need of taking precautions against them, we may now ask what form such precautions should take.

II. WHY SHOULD MILITARY TRAINING AND SERVICE BE UNIVERSAL?

The alternative is not between a professional or "regular" army and a universal compulsory system. No one would propose to dispense with a small professional army. This is conceded to be necessary in any case, both to meet temporary exigencies and to serve as the nucleus of the larger forces which would be called into action in a prolonged war. Such an army could not, even if it were desirable, be recruited to the strength necessary for war with a power of equal rank. It has been abundantly proved that in prosperous times neither the remuneration nor the service is attractive enough to compete with other forms of employment. To increase the soldier's pay to the point necessary to draw largely from productive forms of labor would be economically disastrous both on account of its direct cost and on account of its indirect effect upon industry. And no one would advocate a military system that would be successful only in proportion to the amount of industrial unemployment, or the unattractiveness of civilian life.

The question, then, is how a relatively small professional army shall be supplemented; and we are left to choose between the voluntary and the compulsory methods. But even so, it is important to observe what the so-called voluntary system really implies in use. Since the military need, when it arises, is imperative, and government is charged with meeting it, the legal right of the State to the services of its citizens has never been disputed. As a measure of last resort

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the method of conscription is not questionable. The voluntary system, then, means that conscription shall be held in reserve, in the hope that it may not be necessary owing to that voluntary offer of services which, in any high-spirited nation, the actual shock of war is sure to excite. But as war progresses volunteering steadily declines, partly because the more zealous and patriotic group has already been exhausted, partly because of general fatigue and emotional reaction. The resort to conscription now becomes a threat. Those who nominally volunteer are now, in fact, actuated by the fear of their fellows, or by the consideration that, since they must probably sooner or later serve in any case, they may as well bear the honorable name of volunteer, rather than the shameful name of conscript. In other words, what is called the voluntary system is in fact a system of progressive compulsion. It is *prospective* compulsion, and *emergency* compulsion, rather than *systematic* and *precautionary* compulsion. This being the real alternative, let us consider the advantages of the latter method.

1. *The Need of Training.* The principal difference in effect between the emergency system and the precautionary system is that whereas under the former soldiers are trained in or during war, under the latter they are trained in advance. Military service is a difficult and complicated art. It cannot be extemporized. It is as absurd to suppose that anybody can become a soldier at a moment's notice as to suppose that anybody can become a plumber, or a sculptor, or an engineer, from sheer energy and good-will. It is not customary to call in benevolent bystanders when the water-pipes burst, or when a large sum is to be expended upon a national monument, or when a bridge is to be built. Those who volunteered would undoubtedly learn much before they were through, but meanwhile the material equipment would be wasted, and the crisis would be past. It is a costly and ineffective method of apprenticeship. But the art of war is also the most dangerous of arts, and a decent regard for the safety of the apprentice requires that he shall be made familiar with edged tools before he is permitted to use them. To send enthusiastic poets, piano-tuners, lawyers, and farmers into war is as pitiful and wicked as it would be to send children to put out a fire, or confiding in savages to fight a contagious disease.

Since the use of untrained levies of men is both cruel and ineffective, it has become a fixed practice to send volunteers to school before they are called into active service. But meanwhile the war is on, and the battle is joined. The first decisions may be final. If they are not to be fatal to chances of ultimate success, troops must be used who are at best only half-trained. These men must be sacrificed to gain time until the rest are ready; and the war is prolonged until such a time as the unprepared nation can be said to exert its full force. The argument for universal precautionary training rests, then, upon the undeniable fact, so impressively exemplified in the present war, that training takes time, and that the enemy will not wait for you. That such training should be universal follows from the fact that in a serious and prolonged war there is the likelihood that everybody will be needed. Everybody is a potential volunteer or conscript. If one prefers the phraseology, one can say that since in the excitement of war all good citizens will volunteer, they should be trained

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in order to protect them from the consequences of their own enthusiasm, or in order to render that enthusiasm effective.

The evolution of the art of war renders these arguments increasingly cogent. Civilian and military pursuits have steadily diverged as they have become more highly specialized, so that the average civilian is less fit for war to-day than he ever was in the world's history. In the days of chivalry and knighthood there was no sharp line between civilian and military pursuits. The old frontiersman carried a gun as a tool of trade. Fighting was formerly less a matter of special skill, and more a matter of that physical vigor, hardiness, and steadiness in danger which were also required for livelihood. But a ploughshare cannot be beaten into a forty-two centimetre gun, and if it could the ploughman would not know what to do with it. The technique of war now surpasses that of any other art in its complexity and difficulty, and so long as war continues this technique will develop. The issues of war are so momentous that all the sciences and all the arts will be requisitioned to meet them.

War develops not only in technique, but also in scale. Fifty years ago the essayist Cliffe Leslie made this remarkable prediction:

"When the battles of the Saxon heptarchy were finished, England began her battles with Wales, Ireland, and Scotland, followed by her greater struggles with France. Now a duel between two great states calls all others into the field. And it may be that Asia will one day rise in arms against the intrusion of Western civilization, and that a war of hemispheres may precede the submission by mankind of all their differences to legal arbitration."

Far be it from me to predict any such catastrophe. But the fact remains that the units which engage in war tend to be progressively larger. The very hope of peace lies in this fact, for though such wars are more terrible and destructive, through them bonds of policy and friendship are knit between nations. Nations learn how to act together in a common cause. Such alliances prepare the way for that larger concert of nations that shall adopt and serve the cause of peace. But the scale of war, however benevolent the purpose for which it is waged, puts a new premium on the ability to organize and move men in large numbers, and over great distances. This, again, cannot be extemporized. It requires the accumulation of supplies, methods for large-scale manufacture and transportation, and a power to command and manœuvre great masses of men; for all of which preparation in advance is indispensable.

2. *The Motive of Service.* Upon the voluntary basis service assumes two forms. The first recruits offer themselves gratuitously, some from the motive of adventure, some from the motive of patriotism. After these sources have been exhausted, the State turns in its necessity to those who have not offered themselves, and forces them to serve from fear of penalty. But none of these motives is the proper motive of military service. The citizens who are the beneficiaries of the State, and in whose interest the military exigency arises, should enter its service from the motive of obligation. Any other motive implies that their relation to the State is an external relation to something outside themselves, which they may freely choose either to serve or to disregard. Both the principle of nationality and the principle of self-

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government mean that the action of the State, whether in peace or in war, is virtually *collective action*, to meet the common need or to carry out the common purpose. Fellow-citizens are virtually pledged to make common cause together. They are partners who have assumed a mutual responsibility, each being the keeper of his brother's life and of his brother's interests. To shirk this responsibility is to repudiate a trust and to desert in the great crisis those who have a right to one's faithful support.

To divorce the obligation to military service from the political and civil privileges which men enjoy causes men to forget that such privileges are difficult to achieve and easy to lose. Such privileges do not come about in the course of nature, and they do not take care of themselves. They have to be earned by effort, and protected by vigilance. In proportion as these privileges are disseminated and equalized, every man has a stake in them and is their appointed guardian. In a social democracy there is no class which, because of its larger privilege, can fairly be charged with a prior obligation in times of stress and sacrifice. In short, the association between rights and duties means that in a democracy where power and opportunity are shared alike, the trials and the dangers shall be shared as well.

The recognition of this political truth by its enactment into law is a sign of political enlightenment; the practice of it is a part of civic rectitude; the realization of it in tradition and habit is the achievement of a sound national character. The man who takes his social privileges for granted, and who gives neither service nor even gratitude in return, is like a spoiled child whom a lucky chance or a doting parent has kept from the knowledge of the sweat and blood which his pleasures have cost. Such a child thinks that sugar-plums abound, and that if his whim is momentarily denied it must be through the malice of others. Similarly the civilian who is protected from the hardships of war or the rigor of discipline supposes that peace and livelihood and liberty naturally abound; and he feels abused because he hasn't more of them. He doesn't know that others have conquered the wilderness for him, that others have laid down their lives for his liberty, and that the peace which he enjoys is the fruit of the age-long struggle by which man has lifted himself a little from the brute. He does not know that these treasures, so bitterly won, are in perpetual danger, and are safe only because some men, not irresponsible like himself, are standing guard while he sleeps. He does not *know*. He is blind, like a child, to the realities of life. The war has already opened our eyes. "It may be," said Mr. Wilson in Chicago on January 31, 1916, "that large bodies of our fellow-citizens were resting in a false security based on an imaginary correspondence of all the world with the conceptions under which they were themselves conducting their own lives." The practice of universal service is one sure way of keeping men's eyes open and making them the responsible guardians of what they call their own.

3. *The Distribution of the Burden.* Assuming that war is a disagreeable necessity, and that it is one man's concern as much as another's, it follows that every one should be prepared to take his share in it. This argument appeals simply to the spirit of fair play. No one can wish Society to be so organized that there will always be a group of men whose economic status is so low that they

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have nothing to lose by abandoning their peaceful pursuits. Nor can one wish to have the more loyal and responsible citizens penalized for feeling as we must believe every citizen should feel. Neither desperation nor vicarious self-sacrifice, by which the extremes of Society are impelled to lift the burden from the shoulders of the average man, is a just principle of selection. Its injustice is bound sooner or later to be felt and resented. It is not fair that one man should be taken from his family and friends and exposed to hardship or death, in order that his neighbor, who is already more fortunate, or who is less public-minded, should remain comfortably at home. It is doubly unfair that the man who remains at home should profit by his competitor's absence, as he cannot fail to do; or that he should profit selfishly by his country's need of ammunition and supplies. For the moment it is unnecessary to argue this, thanks to the impressive lesson taught by the recent mobilization of militia on the Mexican border.

But there is another aspect of the matter that is not less important. Warfare of the modern type is the biggest collective enterprise that man is called upon to undertake. It requires division of labor upon an enormous scale. It is important, then, that the burden should be distributed not only quantitatively, but with due regard for the different aptitudes of individuals, and for the economic burdens which they already carry as a public service. No one would think it either just or expedient that a talented surgeon should be sent into a bayonet charge, or that a skilful organizer should be assigned to the aviation service, or that a man of middle age with a dependent family should be sent to the front at the commencement of hostilities. And yet this is precisely what happens under the so-called voluntary system, or under what might better be called no system. There are many forms of useful military service, and there are many degrees of hardship and risk. In order that these shall be distributed most effectively and least wastefully, it is necessary that the Nation should be organized as a whole with an appropriate duty assigned to every citizen, and with every citizen forewarned and forearmed to perform that duty well.

4. *Incidental Advantages.* Military service is not an end in itself. Nor can any lover of mankind fail to cherish the hope that some day it may become unnecessary. Soldiers, like physicians, will strive to eradicate the very evils that make their occupation necessary. The immediate educational values of military training are not to be thought of as sufficient to justify it. It is justified only by necessity. But that is no reason why one should not so far as possible make a virtue of necessity.

Among the compensatory advantages of military training, the first is this: it achieves, as perhaps no other present form of education does, a correlation of all the human powers and faculties. It is a commonplace of educational theory that the human animal, like any animal, is an indivisible whole. His will and his mind and his body are intended to work together, like his lungs and his heart. Nevertheless, the greater part of what is called education proceeds as though man were either a disembodied intellect or an unconscious mechanism. In the school of war a man is taught to do with his body that which the intellect directs and the heart impels. It is a school for the body, in which a man acquires

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erect carriage, endurance, general muscular coördination, and enough manual skill to enable him to use some tool or weapon. It is a school for the mind, in which a man is encouraged to go as far in the solution of the problems of tactics and strategy as his capacity permits or his ambition prompts. It is a school for the passions, in which a man learns to control and organize his impulses, and to devote himself to a purpose. But these lessons are learned together, as the parts of one activity. In short, the soldier learns to function as a man.

This is the more individual aspect of the matter. But the school of war is a school of citizenship. It brings a man into contact with his fellows upon the basis of fellow-citizenship. He learns who his neighbors are. For the time, at least, the differences of wealth, race, education, locality, taste, and social rank, which divide Americans almost as effectually as though they lived on different continents or in different centuries, are lost sight of. Men are brought face to face with the fundamental facts of nationality and statehood. As they look about them into unfamiliar faces, they may for the first time reflect: "Well, here we are—for better or for worse, one people. We are committed to a common task, and in that common task we are dependent on one another. To win we have got to play together." No one can camp, and march, and drill, and sweat, and hunger, and thirst with another man and not learn to sympathize with him. Such a life imposes new tests which bring out what is fundamentally decent and generous and brave in a man. The favorites of fortune lose their accidental advantages; their gilt wears off, and exposes the substance beneath. The less fortunate man has a fair chance. A premium is put on the great elemental qualities of manhood. After such an experience no man can fail to look upon his employer or his employee in a new light, and to rate him more nearly for what *he* is worth, rather than for what his property or labor is worth.

In military training a man learns how to accomplish a common purpose by disciplined coöperation. He learns how to lead and how to be led. He learns to distinguish the subordination of rôle which is necessary for organization from the equality of interest by which all are united in a common endeavor. A man learns to work for the sort of success in which all succeed, rather than the sort in which one man triumphs at the expense of his fellows. And this is the sort of motive which must dominate all sound social and political life.

III. THE OBJECTIONS TO THE PRINCIPLE OF UNIVERSAL SERVICE

1. *Ignorance and Irresponsibility.* It can be said without bitterness that the opposition to this much needed reform springs mainly from ignorance. Men have forgotten, if they ever knew, that in modern warfare on a large scale the voluntary principle is not sufficient. Compulsion must inevitably be a threat or an act of desperation, if it is not a deliberate and foresighted policy. Nothing could be more instructive than the steady gravitation of Secretary Baker's opinion toward the principle of compulsion. He does not love peace less than formerly, but he *knows more* than formerly. His present opinion is the result of close experience and direct responsibility acting upon an honest and loyal mind. He does not love peace less than does Mr. Ford or Mr. Bryan, but he knows more and he cares more about the matter of national

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security. Mr. Bryan apparently thinks that national security can be provided by spontaneous good-will. But he knows very little about it. Mr. Baker knows that Mr. Bryan is mistaken; and Mr. Bryan would himself learn his mistake if he were closer to the facts, and if his countrymen depended upon him for their safety. Mr. Ford may have a vague idea that the Nation can be defended by a fleet of little tin submarines. But he doesn't *know* anything about it. He knows less about this business than General Wood or General Scott knows about the manufacture of automobiles. If he were as well-informed about the business of war as he is about his own business, his opinions might be worthy of attention.

The principal difference between ultra-pacifists and those who are charged with militarism because they favor universal training and service is that the former talk ignorantly and irresponsibly, and suggest absurd little crotchets and inventions of their own, while the latter recognize and respect the opinion of experts. Both are ready to admit that the national defense has got to be provided for, but the latter insist that the provision shall be skilful and effective. It is not any more noble and pacific to slap an enemy with the open palm than to strike him with the clenched fist and with the skill of a trained boxer. It is simply less effective and more dangerous. It is not any more idealistic to be armed with a carving knife or a squirt-gun than to be armed with modern artillery. It is simply more futile and more wasteful. It is not less belligerent to aim poorly, or to be short of ammunition and of breath, than to be a trained soldier; it is simply less intelligent. If one admits the contingency of war at all, then it is not admirable, but only childish and careless, not to be ready to meet that contingency with whatever science and skill will enable one to meet it successfully. Those who advocate the voluntary principle and have confidence in it must believe that the immediate threat of war will stir our slumbering patriotism and excite an ardor that will send a million men gladly into the service of their country. Very good. Let us, then, teach these potential patriots. Let us enable them to do well what even the pacifist will expect them to do and will admire them for doing. Let us qualify them to get full value for their sacrifice. Let us give them, while there is yet time, what they will otherwise wish they had when it is too late to get it. Let us use our imagination and intelligence as they are intended to be used, to *anticipate contingencies*, and to make ready in advance.

2. *Sentimentalism.* A sentimentalist is one whose ideals are sound, but whose methods are futile because he has no sense for reality. Though we act for the future, we must act *on* the present, and with the means which the present provides. He who acts now, as though the ideal were already realized, is incapable of doing now what will realize the ideal. The enthusiasm for peace has blinded many well-meaning persons to the actuality of war. In 1791 the Girondist Isnard made this eloquent appeal to the Legislative Assembly of France: "Let us say to Europe that all the fights which the people shall fight at the command of despots resemble the blows that two friends, incited by a perfidious instigator, inflict on each other in darkness. When light arrives, they throw down their arms, embrace, and chastise their deceiver. So will it be if, when foreign armies are contending with ours, the light of philosophy shine

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upon them. The nations will embrace in the presence of dethroned tyrants—of earth consoled, of Heaven satisfied." Isnard's faith in the bond of fraternal love illuminates the distant goal, but blinds the dazzled eye to every means of getting there. The tragic futility of Girondism is due to mistaking ideal truth for accomplished fact. The earth is still unconsoled and Heaven dissatisfied. They will remain so, as long as the lovers of peace seek to disarm their enemies by the light of philosophy alone, or to accomplish by spontaneous good-will what will require centuries of patient, organized, and forceful effort. Sentimentalists are doubtless a necessary part of the mechanism of progress. They quicken aspiration, and they strengthen hope. But they are not to be relied on for contriving methods that shall employ existing forces and meet existing conditions. Effectual idealism requires vision, but it also requires disillusionment.

3. *Liberty of Conscience.* The man who refuses to serve his country in time of danger may claim immunity from censure as a "conscientious objector." We shrink from the use of compulsion lest it interfere with a supposed right of the individual to do what his conscience dictates. It is important to have our minds set right on this matter. All action of the State imposes compulsion upon the individual. That which makes law is the principle of compulsion. The interest of the aggregate of individuals requires that certain general rules shall be generally enforced, so that each individual who observes them may have a guarantee of their general observance by others. The institution of law would become entirely meaningless and futile if conscience were to excuse a man from obeying it. Conscience is simply the private individual's moral conviction. A man should consult his conscience in the making of the law, or in the selection of his lawmakers; but not in his attitude to the law, once made. A conscientious breach of the law is like any other breach of the law, possessing precisely the sort of justification, no more and no less, that violence, mutiny, rebellion, and revolution possess. If a man's conscience rebels against military service, then he should oppose the making of any law that would require it of him. But this is very different from opposing such a law on the ground that *it would, if made,* require a man to act against his conscience. Of course it would. Any law would. The need of law lies in the fact that private conviction is too various and too conflicting to permit of any community life at all. Hobbes said that the state of nature was a state of war, and that sovereignty and law afforded the only means of escape. He might equally well have said that the state of private conscience is a state of war, from which the principle of universal compulsion provides the only means of escape.

The world is full of conscientious tyrants, conscientious anarchists, conscientious assassins, conscientious bigamists, conscientious monopolists, conscientious employers of child-labor, conscientious smugglers, and conscientious non-supporters. There is no law of Heaven or earth that has not had its conscientious objectors. It is a mistake to suppose that the man who breaks a law is not conscientious. He differs from the man who obeys it, not in the strength of his conscience, but in the effect of his action on Society. The law-breaker attacks the public order and the general interest which that order subserves; the man who keeps the law, even when his private judgment impels him to do

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otherwise, or who reserves his private judgment until he can change the law, supports the public order and promotes that respect for law through which his own conscience may some day become socially effective.

4. *The Fear of Militarism.* Militarism is the love of war for its own sake, or for the selfish advantage of those who participate in it; it is the subordination of the economic or humane interests to the military interests. The opponents of universal service fear that it would promote militarism. But given a state of war, civilians are not less ferocious than belligerents. The most bloodthirsty man is probably not to be found in the trenches, but at home or even across the waters raging impotently over his newspaper. The millions who rush voluntarily to arms under the impulse of the moment are not less hotly pugnacious than disciplined troops. Military training is a strong sobering influence; nothing could be better calculated to breed the opinion that war is at best a hard and deplorable necessity.

The specialization of the military interest arises, not from a universal service which embraces men from all the professions and occupations, but from professional service in which livelihood and success are made dependent on war. A form of service in which fighting is the chosen pursuit develops an interest in war. A form of service which requires men to *leave* their chosen pursuits strengthens the interest against war. The supremacy of the civil authorities is threatened by a large standing army, not by a great national reserve of trained citizens who are about their ordinary business, and who are exercising their normal political functions. An aggressive and irresponsible foreign policy is facilitated by the existence of a large force already under arms, and capable of being used for any sudden and unscrupulous blow. But such a policy is obstructed when the military force is distributed widely and absorbed in peaceful occupations.

Disarmament among nations will not prevent war unless and until it is universal. Otherwise it invites attack. It affects foreign policy only in so far as weakness affects it. It encourages an aggressive attitude in the enemy, until the unarmed nation is goaded by insolence to action for which it is not prepared. If it prevents a nation from doing what is wrong, it prevents a nation from doing what is right. If it would occasionally prevent a nation from wrongfully attacking a neighbor, it would equally prevent a nation from rightfully defending its friends, or its liberties, or its constitution. Weakness guarantees nothing, right or wrong, except that events shall be determined not by one's own will but by the will of others.

IV. THE CORRECTIVES OF THE COMPULSORY SYSTEM

Any public policy involves sacrifices, and is attended by its own peculiar dangers. If this country should adopt a compulsory military system, it follows, as a matter of course, that it should adopt that particular system which would minimize the cost and guard against the dangers. I shall not here attempt to formulate such a system in detail. This is already being done by competent persons. I shall simply indicate certain general principles that must be observed.

1. *An American Military System Must be Popular.* This means little more than to say that it must be American. It must be freely adopted after discussion, and for reasons that recommend themselves to the people. It must reflect the interest of all and

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not of the few; and it must appear in that light. It must not be adopted in haste and regretted in leisure, or adopted in heat and regretted in cool reflection; but it must be adopted as an act of deliberate policy by a body of free citizens who act and vote from the motive of public good.

2. *Military Training Must be Associated with Industrial and Educational Preparedness.* The exigencies of war require this. To be prepared for war a nation must be unified and organized in all its activities. There is no industry, art, or profession that war does not call into play. Strength in war is based upon contact, coöperativeness, and fellow-feeling. Whatever promotes these in any way or in any field must be recognized as a part of that preparation and discipline which make a nation fit and alert. This very reach of war into all the corners and depths of life makes the preparation for war less wasteful. The infrequency of war, the probability that even in the event of war only a part of the immense reserve which universal training creates would be called into service, the pacific hope and intent which must control our military policy—all these considerations make it imperative that military training should be as broadly educative as it is possible to make it. At the same time that a nation is preparing for war it must prepare for peace. The very means by which a nation prepares to defend its life must at the same time enhance its health and vigor. At the same time that a man is making himself a trained guardian of the community, he must be making himself a better man and the community more worthy of his service.

3. *The Army Must be Dedicated to a Humane National Policy.* In the last analysis there is only one cause which justifies the use of armed force, and that is the cause of peace. This cause may require that a nation defend itself against aggression, or that it associate itself with other nations in defense against aggression of which it is itself only indirectly the object. The only justifiable object of war is that international polity in which a nation may enjoy security, and within which there is room for many nations to live without interference. This end should be kept clearly in mind. Every means of promoting it should be employed. Whatever can be accomplished to diminish international conflict of policy, to allay suspicion and misunderstanding, to emphasize and develop community of interest, to excite the friendly instincts and to restrain the impulses of enmity, should be done and done again, with unflagging effort and unquenchable hope. But it is as necessary and as reasonable to fight war with war as it is to fight fire with a back-fire, or to fight wounds with surgery. We should, it is true, develop the art of war-prevention, as we develop that of fire-prevention or preventive medicine. The soldier, like any curative or remedial agent, must seek to make himself unnecessary. But until that day comes, and so long as the evil exists, he must be prepared to combat it with those harsh and repugnant methods which the evil imposes upon him. To perform a hard duty while one must, in the hope of some day leaving that duty behind—to act *now*, but to *look* forward—is only to unite force, aspiration, and intelligence as this half-finished adventure of life requires.

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The DAY'S WORK *of an* AMERICAN AIRMAN *on the* SOMME

By JAMES R. McCONNELL

*[Mr. McConnell is one of the group of American aviators serving in what became known as the "American Escadrille"—now, as he points out in the following article, "Escadrille Lafayette"—in France. Born in Chicago, educated at Haverford School in Pennsylvania and at the University of Virginia, he was twenty-eight years of age when he left his work as Land and Industrial Agent of a small railroad in North Carolina in January, 1915, to join the American Ambulance in France. "The more I saw the splendor of the fight the French were fighting the more I began to feel like an embusqué [slacker]," he has written. "So I made up my mind to go into aviation." He is at present a sergeant-pilot in "L'Escadrille Lafayette," serving on the Somme.—*THE EDITORS]

SOME of the most famous fighting pilots on the French front are in the escadrilles stationed at our field. One speaks with Guynemer, Dorme, Nungesser, and many of the other "aces." On nearly every flying day one or more of them adds a Boche to his record. Of course, with fighting units that see so much action, there is another side to the question, and an alarming number of 'planes leave the field never to return. It is no cheering thing to go back to the front, after a few weeks' absence, and inquire for your friends.

The majority of *avions de chasse* [airplanes of pursuit] bear some distinctive mark designating the escadrille to which they belong. One famous unit is recognized by the stork painted on the fusilage of its machines. Another carries a flaming torch. We had no symbol before, but adopted an Indian head on arriving in the Somme. The United States Government will probably object to it as it did to our being called the "American Escadrille." As a matter of fact we have never been known officially by that name, but as Escadrille N. 124—designated by a letter and number, as are other units. Newspaper correspondents are responsible for the term "American." However, the United States Government suggested to Ambassador Jusserand that the name was not music to a neutral's ears, and, as a result, we were informed that we would be called *Escadrille des Volontaires*. It never had a chance to take, for a few days afterward we were rebaptized as "Escadrille Lafayette."

There are now twenty-odd Americans in the training schools—more than enough to reënforce our group—so only the most promising of them are trained for the Nieuport. It is largely a case of luck. If a student airman finishes his course without a smash-up he stands a good chance of being put on an *avion de chasse*. If he damages a machine, or shows lack of aptitude, he is either made a mitrailleur, or is trained to pilot one of the larger and slower types of aircraft. This method is unfair in a great many instances, for a man who has made a poor showing during his

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apprenticeship often proves a better pilot at the front than does a brilliant pupil.

As I write, a newly fledged birdman arrives at our escadrille, in the person of one Hoskier, from South Orange, N. J. He came to France seven months ago for the purpose of enlisting in aviation, and since then has raised the batting average of the Americans in the flying schools. The lieutenant calls me aside, and asks me to explain to our newest addition the military deportment expected of him. It is the first time he has been at the front and, to be on the safe side, he punctuates his replies with "Sir."

During the winter months the weather does not permit of much flying, but aviation has greatly developed in the past year and machines now fly under conditions which, twelve months ago, would have been considered a bar to aërial activity. As early as the summer of 1916 artillery-regulating 'planes did work in the rain, traveling at times no higher than 400 feet. *Avions de chasse* were never called upon to go out in such weather. Also, they never flew at night — it was thought impossible to land them. The fall of 1916 saw these swift, silver-colored fighting craft darting over the lines even when a canopy of mist would force them to stay under 500 feet, and taking the air on nights when moonlight brought only dimly into relief their landing ground. However, operations of this sort are very limited, for they serve little purpose.

I know of sorties being ordered when the sea of mist was so thick that a woods only a few hundred yards distant was curtained by the veil of vapor. In a few seconds after leaving the ground you plunge into the clammy clouds. Nothing can be seen but a gray-white. You throttle down your motor and dive until the ground again comes into view. There is a road that leads in the direction of the trenches and you keep to its course, for otherwise you will be lost. One sees plainly directly underneath, but ahead and on both sides the landscape is dissolved in the thick fog. From time to time everything is shut off from view by wisps of mist floating beneath the solid strata.

The powerful Nieuport wants to climb, and the only way to keep it from mounting is to shut the motor down to such a point that it barely holds the apparatus in the air. Speed is reduced to a minimum, and the 'plane is apt to slip on a wing. You are flying at but 400 feet, and, should it do so, it would be hard to recover before striking the ground. That thought makes one nervous.

Looking down, you see a long convoy of supply trucks. Scattered groups of soldiers dot the highway. They are not moving—they stop to look up at you. The fields on each side of the road are alive with military preparation of all sorts. A company of soldiers is performing a drill; cavalry manœuvres just beyond; dozens of trucks are parked in a large field adjacent to a hamlet. A second more and you sweep over an enclosure harboring field artillery; somewhat removed is a great depot of munitions. A few shell holes appear near the route, and, flashing a downward glance at the next town, you see that it has suffered from bombardment. An instant later there is a village whose church is roofless; half of the houses are but four walls. The next settlement is completely wrecked. No more automobiles are in evidence. There is a small woods just ahead of you. It looks as if it had been ravaged by fire. The road is torn by shell craters, and many of the trees that border it are shattered. A few soldiers move cautiously along the erstwhile thoroughfare. Brown, winding com-

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munication trenches branch off in all directions and weave into a maze of similar ditches in the projectile-plowed fields. You rush over the ever thickening tangle of narrow excavations, which the Somme advance has left in its wake, and then suddenly you note that all life has disappeared from above ground. The once white road is nothing but a brown smear now. Trenches cut it every few yards. Three or four men are creeping up a *boyau* to the front line trenches. The ground looks like a mass of pale liquid chocolate that had frozen while it was boiling. It is difficult to tell which are the French and which the German trenches, but you see a handful of blue-uniformed men crouched in a shell hole, and know they are beyond the organized positions. Then you must be careful, for the enemy is dug in only a few metres away and his machine guns might find you an easy mark. French troops, in their mud-steeped uniforms, crowd the zigzag channels. At irregular intervals yellow tent canvases are stretched across the parapets to afford shelter from the rain. Dropping low, you see the soldiers' upturned faces, and, forcing an arm out into the powerful rush of air, you wave to the miserable but brave and patient *poilus*. They reply, and you feel complimented. Artillery is in action, raining projectiles on the enemy positions. The reports of the cannon are muffled to a syncopated series of dull thuds by the sound of the motor. You are in the trajectory of the smaller shells and your machine rocks as they hurtle by. Taking a turn toward the rear, you pass over the nest of some of the observation balloons. The weather is too bad for them to be up, and in their oblong shelter holes they resemble fat hogs wallowing in a slough. Around these dormant "sausages" are dozens of little *abris*, where the observers and other men attached to the aërostat sleep. You circle back to the trenches, passing over some batteries, so well concealed that were it not for the flashing of the guns the emplacements would appear no more serious than a clump of bushes. Squalls of stinging rain sweep by. The glass windshield close to your face is streaked with water. Your goggles are curtained. To keep from getting lost, you head in the general direction of the road you used as a landmark.

Up to the present the only military use for aircraft at night is that of dropping bombs. But because of these bombardments, armed 'planes must rise in the endeavor to ward off the attacks. It is more or less futile, for even on moonlight nights it is impossible to see another machine in the air at a greater distance than 300 feet. If by some remote chance one should pass directly underneath, it would then come plainly into view, and to shoot it down would be an easy matter. Until recently only the larger biplanes performed this guard duty. Now the *avions de chasse*, piloted by a few adroit volunteers, disturb the stillness of the night. It is a marvel how they land on an unlighted field in these swift airplanes. But sometimes mist will cover the ground, and then there is a splintering crash and a badly broken up pilot.

Our Lieutenant and Pavelka decided to try this owl-like flying. Pavelka left at five in the morning so that if he lost himself he could stay in the air until daybreak at seven. Soon after quitting the field the small electric bulb, which had been fitted for lighting the compass and other instruments, blew off, leaving him derelict in the sky. Below him the Somme river glowed feebly in the half moonlight. To the east he could see the continuous play of illuminating rockets, as they shot up-

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ward from the trenches, burst into bright stars and fall in blazing curves. Tongues of fire licked the darkness as cannon were discharged, and their exploding shells reddened the distance with fan-shaped beams of light. It was the inferno of the front. The enemy's frontier was clearly enough defined and Pavelka could make no mistake in that direction. He began turning in great circles, always keeping the river in view. A large town, recognized by myriads of tiny lights, loomed up below. He hovered over it. The sound of the motor in the air caused an alarm in this city, which had received nocturnal visits from the German aviators on several occasions. The anti-aircraft guns went into action against the supposed Boche. Grotesque bursts of flame splashed in the dark air as shrapnel exploded near Pavelka's machine. Then the electric lights in the town were cut off, and the city faded into the general blackness of the earth.

"I hung to the river," said Pavelka, "but couldn't tell how far east or west I was. Every time I circled, the wind pushed me farther and farther west. Finally, after what seemed hours, the ground began to light up, though it was covered with mist. When daybreak did come I found myself over a fairly good sized town and made up my mind to land. I spotted a promising looking château with a field near it and landed there. From the khaki uniformed troops about I knew I was in the British lines. Just as I was walking up to the château, out came a British colonel.

"'Hello, good morning, had breakfast?'" he asked.

The French effect a bombardment of the enemy's military stores with a number of machines. The Germans come over singly, or in pairs. A night bombardment, when you are the target, furnishes a good many thrills. You will be sleeping quietly, rolled up in warm blankets, when suddenly you are awakened by the firing of cannon—by sharp reports that are quite distinct from the dull roar of artillery on the front. The anti-aircraft battery barks out four times. There is a couple of seconds' wait and then—*pum-pum-pum-pum* comes faintly to your ears as the shrapnel breaks high in the air.

"Eh, there's a Boche!" cries out one of the pilots, from his stall down the hall.

"D——n the Boche," comments another.

The firing grows louder as a near-by battery picks upthe night raider. Soon you hear the rhythmic hum of the German's motor. From the sound he is quite low. Then there is no noise. He has cut his motor and is swooping down to his target. The long shed in which we sleep is banked on each side with bags of earth, so unless a bomb hits the roof one is in comparative safety. The German airman again switches on his motor and you know from the pitch he is at a feeble height. You are also aware of the fact that he is getting ready to aim, and you pass a few tense moments—you pass them pulling on your shoes, throwing an overcoat over your shoulders, and rushing frantically out to the shelter cave near the rear door of the shack. While the crowd is herding into the haven there is an ear-splitting crash, accompanied by a burst of light. Dirt and stones splash down like rain. A second or two afterward another bomb explodes, but farther off. There is a lapse. The third bomb is a dead one. A few more detonations and you hear the enemy machine speed up and hum away in the direction of the lines. Its work is done, and you go back to your bunk.

I have slept in many comfortable beds, but I know of none that was more

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difficult to leave than the little, stiff, canvas bunk I sleep on in the Somme. For me it is the only warm spot in the entire region. On mornings when there is no flying most of us stay in our cots until after ten o'clock. There's nothing else to do, and it's the sole method of obtaining comfort. We hibernate, as it were. The pilots emerge one by one and congregate around the tiny stove in the mess room.

We are dressed in an amazingly heterogeneous lot of garments, and look more like lumberjacks than military aviators. One has on sabots, breeches (but no puttees), a sweater, and a turned-up hood. A couple more, that remind one of Serbian refugees, wear the fleece-lined leather vests that were sent us by the American Clearing House. Another, to avoid the effort of dressing, is enfolded simply in the aviation fur coat. Two or three layers of vests are popular, and some boast rubber boots.

"Some one go out and get 'Whiskey,'" says a pilot, speaking of the lion cub that is our mascot. There is a sound of growling as the cub is lifted out of his kennel enclosure, and then in he waddles, followed by his playmate, "Carranza." "Carranza" is a young dog that suggests a spaniel. He and "Whiskey" have struck up a great friendship, and, as a token of mutual esteem, lick each other's face in the morning.

"Hello, 'Whiskey-man,'" cries one of the assembly, putting out a hand to stroke the beast. "Whiskey" opens his mouth, while screwing his head to one side, half closes his eyes, and gives vent to a short "wow." Then he slouches off to curl up near the stove. "Carranza" lays his head upon him and they go to sleep.

"This is a rotten war, isn't it?" observes one of the stove-hugging group. "You just sit around and freeze."

"Oh, what the h—— are you kicking for?" puts in another. "Think of the poor bucks out there in the trenches!"

"Yes, I know, but just the same I wish they'd move the blooming war down to Egypt for the winter. That would be soft, wouldn't it—shooing the Boches off the Suez Canal!"

A much belated pilot makes his appearance.

"Well, look what's here! What are you doing up so early? 'Tisn't lunch time yet."

"Go on and jolly," replies the abused one, "but I swear I can't get any sleep at night. The blankets are too short, and every time I stretch I wake up."

"That's too bad about you," chimes in another. "When the war's over you can get a job playing the hypnotized sleeper in a window display."

"'Whiskey,' drop that!" screams a pilot who has observed the lion chewing on something in a corner. "He's eating up your flying shoes."

One man holds the fur boot while another taps the king of beasts on the nose. After a few deep growls the cub lets go with his paws, loosens his jaw grip, and sits down on his haunches with an offended look on his bewhiskered face.

The lieutenant enters. Every one shakes hands with him, as is the French custom, and says: *Bonjour, mon Lieutenant!*

The mail arrives. Those that didn't receive letters look over the papers.

A wave of cold air sweeps in from behind the blanket covering the entrance.

"Eh, shut the door! You must have been raised in a barn!"

If the weather shows no signs of clearing up in the afternoon, one or two of us go for a walk; another may visit some other escadrille for a game of bridge. The rest organize a rabbit-

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hunting expedition. It usually ends in ignominious flight from the game warden.

The longer one stays on the ground the less one likes to fly, and I've noticed, as a consequence, that our morale is not up to its standard of last summer. I know mine isn't. For one thing, flying is far from agreeable in winter because of the extreme cold. The sound of a motor turning over in the morning seems to waft a current of freezing air into my blankets as I contemplate going aloft.

When the weather is good one hears the drawing apart of the hangar curtains just before daybreak. The mechanics shout as they trundle out the airplanes. In a few minutes the motors begin an infernal racket. They roar for a short time, as they are tested, and then there is silence save for the low hum of the S. P. A. D.' s* whose engines are kept warmed up. Our sortie is scheduled for 9:30 this particular morning, and so the prospect of getting up is not an immediate threat. You hear the machines of another escadrille buzz off toward the lines with the noise of so many saw mills.

Good old Tiffin, our orderly, comes into the room, takes our boots out to clean, and returns with a small pitcher of hot water—a mark of special solicitude on mornings when your are to fly. *Il fait beau!* "A fine day!" he remarks.

Tout le monde debout! "Everybody up!" shouts the captain from his partition in the barracks.

We get dressed, but this time in full uniform, for we are to go over the lines, and various things might happen. In the cold mess room you gulp down chocolate or coffee, and stand around waiting until time to go out. There is the sound of motors and now and then the rapid reports of a machine gun.

The phonograph is turned on and the winsome strains of a tango, or the jig time of a rag, fill the board enclosure.

"Luff, be sure and knock down a Boche this trip," says one of the pilots, addressing our champion [Lufbery]. "We're sort of falling behind." As a matter of fact we have not, so far, done much in the Somme, outside the ordinary duty of keeping Germans off the lines, though Pavelka had a fight after which he saw his adversary dropping, but it was not confirmed, and Lufbery shot down his sixth enemy 'plane which, though put in the official communique, was not credited to him, nor to any one else (He has since brought down another, officially reported).

"Fifteen minutes before we leave the ground—come on—off to the war!"

We walk out in the half frozen mud to the waiting machines, and are helped into our fur combinations and boots by our mechanicians. As a protection from the cold, some of us wear face masks, and the rest are so bundled up with hood, muffler, and goggles as to be equally difficult to recognize.

Dressed for the air, the aggregation reminds one of actors in a Chinese devil dance. You climb into your apparatus and snap the belt around you. One by one the machines pull out of line, head into the wind, and after a short run take the air, climbing at a steep angle. The pilots are divided into two patrols.

Your group is to meet over a near-by town. It is half an hour's trip by automobile. You are over it in three minutes by aërial route. Your companions are circling over the meeting place at 7,000 feet. Swinging in close to each other, the little fleet heads eastward, following the course of the sluggish Somme. Below you is a great expanse of brown landscape, laced by an intricate design of white roads.

*The initials of the French manufacturers of the type of airplane known as the "Spad."

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Frost is on the ground and the country looks like a vast, sandy area. To the left is the territory held by the British, and you try and picture the soldiers in their khaki. In six or seven minutes you are over the line of observation balloons. They are at about 4,500 feet but you have been climbing so rapidly that they look the size of dill pickles. The towns on the banks of the Somme have shrunk to the dimensions, and closely resemble, the little knock-down toy cities that one gives children on Christmas. Southward is a hamlet where, until a few days ago, the Foreign Legion was resting. There are more than thirty Americans in that famous corps, and as you looked down you wondered if any were aware that the tiny 'planes high above them were piloted by their compatriots.

The ground just back of the front reminds one of a great terminal. Little white trails of steam mark the constant arrival and departure of supply trains. You cannot distinguish the nature of the stores, or pick out any details, but it is patent that they cover miles. Oddly enough there is but little evidence of this on the German side. One sees the smoke from their trains, and that is all.

From an east and west course the Somme makes a sharp southward turn. You see it sparkle as you look against the sun. The canal, that follows its windings, bends with it. At this elbow is ancient Peronne, looking like an island city. You cross the battle lines just before it disappears beneath your lower planes. Running north is a wide brown scar that cuts the pattern-like fields. The Big Push rubbed there. To the south this band of blasted ground leads off at an angle from the river. Its strands of water-filled trenches shine like little brooks.

Observation machines are moving slowly over the lines. When the fighting fleet arrives on the scene the aircraft take on new life. A cumbersome old fellow that was loitering at the edge of the aërial battlefield executes a surprisingly rapid turn and heads with such determination into German territory that you think he's bound for Berlin. A sort of "come on boys" spirit animates the whole flock. It makes me think of fish that, lazily sunning themselves in a pond, are startled by a stone dropping into the water. You are flying at more than 14,000 feet and the cold begins to make itself felt. Looking up into the round mirror, you see that your face is red as a beet. Sometimes there is a white line under the goggles and you know that the skin over the cheek bone is frozen. There are no German 'planes over the lines, but two can be seen very low far within their territory. Another, at such a great altitude that he appears as a speck above you, is waiting for the opportunity to attack some isolated machine. You push on a lever and throw your rapid-fire gun into gear, press on the release, and shoot a few rounds—good, she's working! Your group has been following down the German part of the Somme, and, having reached the southern end of our sector, turns north to tour the lines. Lieutenant de Laage in his swift Spad races back and forth in large détours, so as not to outdistance the rest of us. It gives you a feeling of confidence to see him manœuvering above, for no finer soldier ever lived. Six *avions de chasse* loom up coming from the German lines. Boches! It looks as if a fight were coming off—but no, for on closer inspection they turn out to be a French unit that had gone far afield in search of their quarry.

The great superiority that French aviation has obtained over the German is even more evident in the Somme than at Verdun. Some days the air is so

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full of French craft that it is nothing short of suicide for a German to venture within five miles of the trenches. Due to this superiority, the aërial front is more than four kilometres in advance of that held by the infantry.

Your knees are trembling from the cold and your feet are numb. A man ahead starts down in wide circles. He, too, must be feeling the cold and seeks a warmer level. You follow. A hammering sound strikes your ears like the noise of a machine gun at close quarters. "What the ——" You look around—nothing! It was only the wind making your hood vibrate. Two balls of black smoke burst under a machine ahead of you. They were very near and the pilot makes a sudden dive to evade the range of the shrapnel. You start to laugh, but just then a salvo breaks uncomfortably close alongside of your 'plane, and you do some dodging on your own account. In a few minutes Peronne again passes beneath. An observation airplane hovers over it at about your level. Passing close, you see a bundled-up figure wave, and you return the compliment. Now you are over the junction of the French and British lines. Shells are breaking in the trenches south of Bapaume. Possibly an attack is taking place. You wonder if the "Yanks" are in the action. A group of strange-looking machines approaches. They are flying in a "V" formation. Their cockades have a blue circle on the outside, just the reverse of ours, which from the centre run blue, white, red. You know them to be British. It is remarkable how they keep in such perfect formation. They sail serenely along in an unperturbed manner, while a Frenchman is always cutting figures in the sky. It's the difference in temperament, I presume.

To the northeast a thick blanket of white fog draws slowly nearer, shutting off the ground from view. It is the sea mist. In a few minutes it will hide the earth, and you race against it for home. The air becomes blurred, you drop low. Whisps of mist streak from the little clusters of trees, as if smoky fires had been built in them. When you arrive over your field it is hazy. The wind gauge is hardly visible. Aligning yourself with it, you dive for the field, redress, flash over the ground, and, losing speed, hit the earth. Snapping on the motor, you roll toward your hangar. Your mechanics run out to guide you.

Des Boches? they ask.

Non, rien a signaler. "No, nothing to report."

The 'planes come to earth at short intervals, one after the other. One is missing, but the pilot has telephoned that he landed at another field.

Lufbery had gone off on his own hook and found a German. "What did you do to him, Luff?" asks one of the pilots.

"Well, I don't know if I got him or not. I got under his tail, and shot, and he dropped straight down. There was a lot of smoke coming up. He was a big, fat Boche, too—one of those easy ones."

At twelve we gather at table for our noonday meal. We have a rule that only English is permitted at lunch and French at dinner. A slip costs two sous. Some of the men are strangely silent at night.

When the meat is brought on, "Whiskey" starts loping around the table. He finds an opening and bounds up on the bench. "'Whiskey-man,' get down!" One large paw reaches out on the table, but before he upsets anything a hand takes a hold of the scruff of his neck and pushes him to the floor. He gives a long-drawn-out roar and tries again. "*Oh, le plus beau des lions,*" says a special friend of the cub's.

"Yes, and that costs you just two

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cents," calls his neighbor, mindful of the tin for fines. We hear the hollow whistle of a machine coming down to land, as it passes over the barracks.

A pilot jumps to the door and looks up to see the mark on the machine. The missing one has returned. "Is it from our escadrille?" asks the Captain.

"*Oui, mon Capitaine.*"

"Two cents!" cry out the others in chorus.

"It's a shame he can't land without it costing me money," says the forgetful one, as he drops a two-sou piece into the tobacco tin.

"What mark has he got on his machine, anyway?"

"None besides the Indian head."

"What's the weather like?"

"Rotten, the clouds are at about 200 metres."

"Are we on alert this afternoon, or scheduled for a sortie, Lieutenant?"

"Alert, but in this weather I don't think more than three machines will go out if any are called for."

"Put some more coal on the fire. It's freezing in here."

"I'll tell you one thing, when I go to America on leave I'm going to bring back a fireless cooker and sleep in it."

Yesterday was Christmas. The night before we waded through the mud to attend a vaudeville staged by the mechanicians of the group in a reserve hangar. It wasn't a bad entertainment, and was accompanied by a five-piece orchestra! An empty shell case served as a triangle. Outside, giant beams of light searched the clouded heavens for possible aircraft. The dull booming of guns rolled in from the front. That show and our Christmas dinner were the only reminders of the festive occasion. The weather was too bad to fly in, but one pilot tried it and killed himself landing.

As we and our guests sat down to our *Dîner de Noel* (Christmas dinner), I noticed we were thirteen at table. I commented on it to Lieutenant de Laage, whom I was sitting next to.

"What is that superstition with you?" he asked. I explained that with thirteen at table it was supposed that one of the assembly would die within the year.

He laughed. "Well, it will hold good with this crowd," he said, "but, unfortunately, there will probably be more than one."

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The EVOLUTION *of* FIELD ARTILLERY

By MAJOR E. D. SCOTT
(*Field Artillery, U. S. Army*)

FROM earliest times, artillery has been classed as light and heavy, and essentially the uses of each have remained the same—the former to attack unsheltered, the latter to attack sheltered, personnel, animals, and material.

The old muzzle loader was a practically indestructible tube of iron or bronze mounted on an equally simple and strong carriage. The ammunition was quite in keeping with it. Round shot and grape or canister constituted the projectiles of the field gun.

Their use was equally simple. When the enemy was still some hundreds of yards distant, well within what are now termed effective rifle ranges, the gun was loaded with a round shot, leveled, and fired in his direction. The round shot struck the ground some distance from the muzzle and went bounding along. Infantry in those days marched to attack in masses or, at least in lines three deep. It was the practice to open a lane for an oncoming round shot. When this was not done the shot opened one for itself.

When the enemy came within 300 yards, grape or canister was used. The frame of the former or the case of the latter broke up on discharge, and the balls acted as do those from a shotgun. It was now a question of loading and firing as rapidly as possible into the smoke, but at the best only a few shots were possible before the charging infantry arrived with the bayonet.

At the beginning of the Napoleonic wars, the guns of the artillery were quite generally scattered along the infantry line, Napoleon himself being the first to employ them in masses. Such masses fairly swept away the infantry or cavalry that ventured a charge against their front. One of Napoleon's greatest victories was practically won by the artillery. Yet at times, due to one cause or another, frontal attacks against such lines succeeded. Waterloo furnishes a very good example of the use of artillery at the time. The British artillery was in a long line along the crest of a ridge, with the infantry drawn up in small squares a little distance behind the crest. The gunners worked their pieces until the French cavalry were almost upon them, then sought safety in the infantry squares opened to receive them. The wave of attack past, they returned to the guns.

In our Civil War the mass idea was little used at first. The batteries were usually scattered along the line, and fired independently at whatever suitable targets appeared in their front.

The Germans never forgot the lessons of the Napoleonic wars, and, against Austria in 1866 and France in 1870, employed their artillery in masses, regiments and even brigades being directed by a single head, the idea being to bring an overwhelming fire to bear on the part of the enemy's line selected for the decisive attack by the infantry.

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This has been the guiding principle in the use of artillery ever since.

The principle sounds simple enough, but in its application many difficulties arise, and the value of artillery is largely gauged by its ability to meet them successfully. In the day of the muzzle loader, with its short, effective range, but one method was possible: to line up before the position and fire away. The short range allowed of but one line of guns, but they could be crowded as closely as desired. Occasionally the ground permitted of a second line or tier, above the first. With the advent of the steel gun, with its greater effective range, tiering became easy, the safety of the front line being assured by the height of the trajectory. When smokeless powder came into use in the '90's, tiering was further facilitated, since the smoke of the first line no longer obscured the view of the second. But it was still impossible to keep the enemy long in doubt as to where the decisive blow was to fall. Some little attempt was made to use indirect fire, so as to be able to keep the enemy in the dark as to the disposition of all the artillery, and so at the proper time to subject him to a fire of unexpected volume. But this sort of thing was in little favor, largely for the reason that the means available were very crude and unsatisfactory. The result was that the artillery had to have the choice of position. It demanded and got the use of every prominent ridge and hill. Thus its needs dictated largely the dispositions of the other troops, and determined in great measure the choice of the field of battle.

The adoption of accurate and rapid methods of indirect fire changed all this. It was now only necessary that the officer conducting the fire, or some one for him, should see the target, to deliver upon it a more accurate, rapid, and controlled fire than was ever possible under the old system. Except as observation points, the prominent points in the landscape were no longer in demand for the artillery; in fact, they were avoided as easy targets for the hostile artillery. The needs of other troops were more considered in the selection of the field of battle.

With the muzzle loader the ranges were so short that the gunner could see his target with the naked eye; consequently, open sights, similar to those on the pistol or rifle, were used. The ranges possible with the new pieces were such that this was no longer true, and optical sights made their appearance. These had not yet come into use in the United States at the time of the Spanish War, but were more or less common in European armies.

At about that time it became known that the French had a gun called the "Model 96," made on a wholly new system. The points of the new system were, briefly, that the gun when fired slid to the rear on its carriage, compressing a set of springs which, when the force of recoil was expended, returned it to its firing position. By combining a hydraulic system with the springs, the shock of firing was so completely neutralized that the carriage remained in position, and a number of shots could be fired without relaying (aiming) the gun. This increased the possible rapidity of fire and also its accuracy. It was the first adaptation to field guns of a system for controlling recoil that had recently come into use with the heavy guns of position in fortresses and seacoast works. Moreover, the weight was well within the requirements of mobility.

A simple yet ingenious system of optical and leveling instruments enabled the gun to be laid on (aimed at) any target, though unseen to the gunner.

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The possibilities of the new gun were beyond anything formerly imagined. Military Europe received the information with incredulity, quickly followed by alarm, and then came a frantic effort to produce something just as good. The United States followed suit in 1904, and by 1906 the then existing batteries had been equipped with guns of the new system.

All gun makers have followed the French system, all have made improvements on it, but up to the beginning of the European War the French gun, as improved, was better than the best of any other nation.

The remarkable performance of this gun had an unfortunate effect on the French military. It lulled them into the belief that their gun was all-sufficient. Other nations, knowing that the field of battle would present problems that no gun of light metal could solve, and that the light piece could never replace the heavy piece in its particular rôle, went quietly ahead adapting the new system to the heavy artillery. Model after model appeared until in 1912 it was believed the limit had been reached when the Skoda 12-inch howitzer appeared at the Austrian manœuvres. But a further surprise was in store when the German 17-inch howitzer appeared in Belgium in 1914.

Not all the French were obsessed with the all-sufficiency of their adored "75's." But the advocates of heavier metal were given little consideration, and it was only in 1913 that the organization of five regiments of heavy artillery was authorized. They were not completely organized or equipped when the war began a year later.

What happened is history. The heaviest fortifications fell one after another before the heavy artillery. The French gun everywhere demonstrated its superiority to others of its class in field fighting, but also its relative uselessness against even such field earthworks as infantry could construct overnight.

Then came the rush to remedy the deficiency. The coasts were in no danger from the German fleets, and their fortifications were stripped of every heavy gun for which a carriage could be improvised, and these were hurried to the front. Factories were established, guns and carriages were designed and built—ever the cry was for heavy artillery and more heavy artillery, to match, and eventually to overmatch, that of Germany. The great race for munitions was on, the race that meant winning or losing the war, and the dominant feature of it all was artillery, and mostly heavy artillery. Not until the heavy artillery of the Allies matched that of the Germans did their prospects for a successful issue brighten.

Under the new order of things, positions for the guns were classified roughly as open (wholly exposed to hostile view), partly open (partly concealed by a crest or other cover, the gunner still able to see the target through his sight), and covered (wholly concealed from hostile view).

In the Russo-Japanese War the open position quickly went out of favor. The Russians were its strong advocates. The Japanese, partly because of their inferior artillery, preferred the partly open or covered positions. At the Yalu the covered Japanese artillery put the exposed Russian artillery out of action in a few minutes. Little by little the lesson was driven home until at Liao Yang the artillery of both sides was generally well concealed. Poor laying equipment forced both sides to use the partly open position to some extent throughout the war.

In the Balkan wars of 1912-13 the partly open position was used to some

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extent, but so generally with unfortunate results that the saying arose, "A battery seen is a battery lost."

In 1914 the French were wholly committed to the covered position. The Germans and British, while recognizing its value for some purposes, believed that the partly open position had some advantages in certain conditions, and entertained a lurking belief that the open position might not be a bad thing at times. But the early experiences of the war proved the French contention that, except in very exceptional circumstances, more effective work could be done from the covered position, while the hostile fire could only be more or less at random. The covered position came into universal use.

It must not be supposed that the artillery assumes one long straight line. The necessity for concealment, for control, for ability to concentrate its fire, and other considerations make the line anything but straight. Batteries are often placed behind others, and the heavy batteries are scattered about. Generally speaking, the front half of the artillery area contains the light artillery, the rear half the heavy.

In the days of the muzzle loader, the officer conducting the fire of a battery could best do so from some position in or close to the flank of the battery, where the target presented the same appearance to him as to the gunners. With the covered position this was no longer possible. It was felt that he should still be where he could exercise personal control over his battery, and it was thought that a ladder or a convenient tree would enable him to do this, while still observing the enemy and the effect of the fire. It was recognized, however, that this might not always be possible and that means should be provided to enable communication to be maintained from a distance. The telephone and semaphore signaling came into use.

The long range of the modern gun enabled its fire to be delivered on parts of the battlefield far removed from its immediate front, and this led to the development of the principle that artillery is considered concentrated when so disposed that its fire can be concentrated. By dispersing the batteries the best position could be utilized, the difficulties of the hostile artillery increased, the safety and therefore usefulness of one's own artillery increased. This, however, demanded a more elaborate system of communication than was formerly considered necessary.

In the trench warfare of Europe, it soon became evident that the separation of the commander from his battery was necessarily the rule, that one person could at best see little of the field in which targets might appear and which the battery might reach with its fire, and consequently the more observers the more valuable the battery. It became the custom to put in as many observers and telephones as there were personnel and material available.

Artillery communication systems today much resemble those of cities, switchboards and all. Since so much depends on the wires remaining intact during a bombardment, they are run along the sides of communication trenches or buried, and those in the front lines, at least, are laid in several strands, well separated. If one ceases to work, the operator quickly tests others until a live one is found.

Reaching the hostile artillery in a covered position presents a difficult problem. Before aërial observation became so common many methods were used in seeking a solution, and most of these are in use to-day. When practicable the ground over which an enemy will be obliged to operate is

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carefully mapped and every possible artillery position and route thereto carefully noted. Fire coming from the direction of one of these positions indicates it is occupied, and the location is at once swept by fire. It is sometimes possible to locate quite accurately the direction to a hostile battery by the sound of its guns. Such direction known, the probable position of the battery may be determined from maps, or from knowledge of the ground. If the direction be determined from two points of the line well apart, the hostile battery position may be determined with some accuracy from the sound alone. Shot furrows in the ground give close approximations for direction, and if one or two time fuses can be picked up their settings may determine the range. Scouts and observers to the front and flanks endeavor to get information for the artillery, and it is the duty of all arms to transmit any information of value to the artillery that may happen to come in their possession.

But with the best of information, only approximate ranges and directions can be determined, and the fire of the artillery can be delivered only on a certain area known to contain a target. It may or may not be effective. This condition still obtains, for the use of light overhead cover or screens aids in concealment against aërial observation. When it is considered that in the open, with fire perfectly adjusted, with conditions of observation perfect, with the gun crews under no strain whatever, a target the size of a gun and caisson has one chance of being hit for every eighteen rounds fired at it at a range of 3,000 yards, the chance of escape of a gun, invisible, but known to be somewhere in a certain acre of ground, is very good indeed, unless sufficient ammunition is expended on that acre to tear up every portion of it. Not more than one four-gun battery would be contained in an acre, and it actually covers but four tenths of one per cent. of the area. As nothing short of a direct hit will put the gun out of commission, its factor of safety may be considered as high.

Without being able to observe and so judge of the effect of his fire, the battery commander is in much the position of a man firing in the dark. Moreover, an alert enemy can add to his troubles. In one battle of the Russo-Japanese War, a Russian eight-gun battery took position in a level field, a few hundred yards in rear of a low ridge that completely concealed it from all points in the Japanese lines. The battery commander conducted the fire from a higher ridge in rear of the battery. One Japanese infantry attack after another crumbled under the fire of the battery. The Japanese artillery tried in vain to locate it. When their fire fell somewhat away from the battery its fire became slow and irregular—to the hostile artillery a sure sign of effect—and they poured their heaviest fire on the spot; when their fire fell near the battery, it increased its rate, and the Japanese sought to locate it elsewhere. The ruse worked successfully through a long summer day.

Since it is necessary that the officer conducting the fire or some one for him see the target, it follows that every prominent point in the hostile lines becomes an object of suspicion as the possible location of a hostile observing party. Now if an observation party can be put out of action, it means that the artillery it serves will also be out of action until the observation party is replaced. A single shrapnel may do more good, burst in front of a likely observation station, than a ton of shell thrown over a hill. Consequently no such place is allowed to go unscathed.

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This, rather than vandalism, is the reason why so many windmills, churches, towers, public buildings, etc., have been destroyed in the path of advancing armies.

It is a common practice with us, and was with others before the war, to utilize such places as dressing stations for the wounded, for which they offer obvious advantages. But they offer equally obvious advantages as observing stations, and the enemy cannot be blamed for protecting his own interests.

Before the war many means had been resorted to for improving the observation. Among the more common was the ladder, which varied from a simple pole fastened to a caisson, to a very expensive and ingenious adjustable tower that raised the observer fifty feet above the ground. From all reports, the ladder in every form has practically disappeared from the battlefields of Europe, partly because of the general use of aërial observation, partly because of the persistence with which the enemy watches for and destroys observing parties, partly, perhaps, because of the settled conditions of trench warfare permitting of more or less permanent installations. It is probable that in a warfare of manœuvre they would reappear.

A modification of the ladder is the periscope. The principle of this is seen in the optical sight and artillery observation telescopes in general use. In these the object glass is from a few inches to several feet above the eye piece, enabling the user to see over a shield or other protection. Periscopes are now reported thirty and forty feet high, enabling the observer to look over the tops of trees or buildings. Such an instrument attracts no more attention than a telegraph pole, whereas the ladder with a bulky object on it (observer and shield) was unmistakable.

Before the European War some progress had been made in aërial observation, but the extent to which it has been used was hardly anticipated. The kite and the captive balloon had been most experimented with.

The airplane was, and is, used to a great extent in artillery observation. In the earlier stages of the war, the manœuvre period, there was usually little time for the erection of overhead concealment for the guns, nor was its value fully appreciated, and the airplane observer had little difficulty in locating them. Transmitting the information to the friendly artillery was another matter. One quite common method was for the airplane to drop a smoke bomb when over the position of a hostile battery. The artillery observation party told off to watch that particular airplane kept a range-measuring instrument directed upon it. When the smoke was seen the instrument was read. Applying a correction for the hypothenuse of the triangle gave the approximate range to the target. The direction was, of course, that of the smoke. With this data the artillery opened fire. The airplane meantime circled about, and, by a series of prearranged signals or by wireless, reported on the fall of shots until the artillery had secured a fair adjustment, or perhaps until sufficient effect was apparent.

The great value of the airplane for artillery observation naturally led to every effort being made by the opposing forces to defeat its purpose. Not only was overhead concealment developed to an unimagined degree, but it became the regular practise to detail airplanes as escort to those containing artillery observers, to protect them against hostile airplanes, and special artillery units were organized whose sole function was to fire on hostile aircraft.

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In the trench warfare of Europe, the targets fall naturally into several classes, each requiring its special method of attack. Shrapnel is still the premier projectile for use against troops in the open, while the necessity of shell for attack on protected troops has only been emphasized.

The trenches are usually in three lines, from half a mile to a mile apart, the organization of all being much the same. Briefly, each consists of three lines of works. In front is a continuous line of standing trench, very narrow, and divided by six-foot-thick traverses into lengths of from eight to sixteen yards, firing space for from eight to sixteen men. Twenty to forty yards behind this is a second trench, broad and deep. A banquette or platform of lumber or earth enables the men to fire to the front. Bombproofs dug in the walls furnish living quarters and shelter during bombardments. This trench is connected with the fire trench by tunnels or by open trenches, deep, narrow, oblique to the front. From the main trench deep, narrow, zigzag trenches run to the "strong point" from 100 to 300 yards in rear. One or more of the angles in this communicating trench are armed with machine guns set to sweep it to the front. Just in rear of the main trench a short trench branches to the front from both sides of the communicating trench. These are the bombers' stands. The strong point, one for each battalion, is a deep large hollow, or a ruined village or farmstead, with recesses about the edge for machine guns, and bombproofs for the garrison. In front of the fire trench is the wire entanglement. Its character may be judged from the fact that 500 yards of wire per yard of front often go into its construction. At intervals, in front of traverses and between the fire trench and the wire, are machine gun positions, deep, small pits allowing of oblique fire against the enemy's line some distance away, but not to the front, from which direction they are carefully hidden.

In preparation for an assault, then, the artillery must destroy works constructed with great care, extending to a depth of 300 to 400 yards, and as nearly concealed as possible. Besides, the hostile artillery must not be neglected. It is difficult to determine when the destruction is sufficiently complete, and, once the infantry attack is launched, the artillery must shift its fire to the second line. All parts of the first line that are not destroyed at once spring to life, and the struggle is on for possession of the ground.

The artillery on both sides is disposed anywhere from just in rear of the first line to in rear of the third line. Artillery within a mile of its own trenches cannot very well attack the hostile line in its immediate front without danger of damaging its own, but it can reach the second line and the hostile artillery in front. For attack on trenches, then, the artillery well to the front is used to attack hostile artillery or parts of the hostile line far from its own front. Three thousand yards appears to be the favorite range sought. The position of the opposing artillery is usually known with more or less accuracy; but since it is concealed, the result of fire upon it is more or less a matter of conjecture.

The difficulty of determining from observation when a bombardment has been sufficient has led to calculating just the amount and kind of fire that should give the desired result.

Since every effort is made to conceal all works and artillery not only from the front but from overhead, it is impossible for the artillery officer conducting the fire, or observing, to see more than a small proportion, if any,

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of the targets he must attack. To render effective attack at all possible, careful maps are prepared of the terrain occupied by the enemy. These are divided into small squares numbered and lettered. From the reports of observers, of patrols and spies, from photographs taken from airplanes, etc., the enemy's lines, batteries, communications, camps, depots, etc., are carefully plotted on the map. When it is desired to attack one of these it is only necessary to designate the batteries to fire on "S-16," the amount and kind of ammunition, time to open fire, etc. Observers on the ground and in the air note and report any corrections necessary, and endeavor to determine the effect. Thus much of the fire of artillery is directed against areas known to contain certain targets rather than against the targets themselves.

For a systematic attack a table is prepared designating the batteries, the target or targets assigned to each, the amount and kind of ammunition, the time when fire is to begin and to cease, its character, etc. The firing begins and continues until the programme is complete. Observers in airplanes, balloons, trees, holes in the ground, in the front line trenches, watch the effect. When darkness falls, infantry patrols creep through the devastated line to discover what parts of it have escaped. Based on the reports, another programme is prepared and carried out, and so it continues until the destruction is sufficiently complete to warrant launching the infantry attack. Sometimes the bombardment goes on for days, again it lasts but a few hours. Light artillery is largely used against the wire, heavy artillery against the other works. The high explosive shell is the favorite projectile with both.

Anti-aircraft artillery had been developed to some extent before the war. There was one type of gun in our service, and some countries had several. Naturally there were many difficulties in the way, such as devising any sort of target that would even approximate those of war, and finding a place where firing could be done with safety to the inhabitants of the surrounding country. Besides, the trajectory varies from a very considerable curve, when gun and target are in the same horizontal plane, to a straight line when the target is directly over the gun, which calls for a decidedly ingenious make of sight.

An interesting feature of artillery fire is the "curtain" or "barrage" fire. This means simply keeping up such a terrific fire on a certain area that an enemy cannot or will not cross it. When an infantry attack is launched, a barrage on the ground beyond the enemy's front line prevents his reinforcements coming up while the attacking infantry are having it out with the defenders of the trench. If the attack carries beyond the first line, the artillery of the defense promptly interposes a barrage to prevent its reaching the second line. If the attack on the first line fails, the defending artillery puts a barrage behind the attacker's line, to prevent reinforcements coming up to it, and to enable the victorious defenders to counter-attack and destroy the enemy in his own trenches. It is merely a wholesale development of a long established method of supporting the infantry.

In fact, it may be stated that no new methods or principles have been evolved, but that many of the old have been developed and applied in a manner and to an extent never anticipated.

The type arrangement of artillery for battle is, first a line of light batteries, both gun and howitzer, each piece with a caisson full of ammunition beside it; from six to eight hundred yards in rear the remaining caissons of the batteries (combat-trains), filled with ammunition

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as an immediately available reserve; from one to several miles further to the rear another caisson or wagon per gun (ammunition train); about half a day's march in rear, in vehicles (ammunition columns), an amount of ammunition equal to all in front.

This last line forms the connecting link with the reservoir. The vehicles were formerly horse-drawn. With the rates of expenditure considered probable, this method of supply would suffice. But the rates exceeded all expectations, and only the auto-truck and good roads, together with the railroads, made it possible to keep the guns in action. Horse-drawn vehicles would never have been equal to the task. Our three-inch gun can expend in fifteen minutes as much ammunition as a four-mule wagon can carry. The French gun can do the same in half the time. Mechanical transport for the resupply of ammunition is no longer merely desirable, it is an absolute necessity.

Prior to the European War some attempts had been made to utilize the gas engine for the hauling of artillery. A notable case was that of an English militia battery which equipped each of its guns and caissons with a four-cylinder automobile. In July, 1914, the battery made a run of 120 miles in six hours, went into action in a rough field, did some firing, and then changed to another position a mile from the first. The occupation and evacuation of position were performed with as much celerity as though the carriages had been horsed. Four days would have been unusually good time for horsed artillery to have accomplished as much as this motor battery did in six hours.

This performance might have led to a wide development of such transport but for the sudden outbreak of the war. It was the first evidence that mechanical transport might be as successfully applied to light artillery as to heavy. Its value for heavy artillery had long been recognized. Soon after the Boer War the British adapted the caterpillar to the traction of their one heavy gun, the sixty-pounder (about a five-inch). The load behind the tractor was about five tons, and, curiously enough, the complaint was made that the tractor was too slow—could make only five miles an hour. That was certainly better than any horse transport could do. Besides, the caterpillar could traverse soft ground that no horses could, could cross ditches, push straight ahead through a hedge, climb a twelve-foot bank with a 45° slope, and do other things that draft horses could not. It seems curious to read in the papers rival claims as to the caterpillar, the adaptation of which to the "tanks" in Flanders recently caused such a stir. As long ago as 1908 a lantern slide showing a caterpillar drawing a British sixty-pounder was in use at our Service Schools. In 1912, heavy howitzers, up to twelve-inch, were towed about by auto at the Austrian manœuvres.

It appears certain that the Germans and Austrians had mechanical transport, probably all gas engines, for all artillery above the six-inch, and the same is true now of the Allies. For the lighter pieces, a method much used on both sides is to load gun, caisson, and crew on motor trucks, and drive to the place where wanted. There the pieces are put in position by hand. Limbers and their teams follow as rapidly as they may. This method has been experimented with in this country.

Another method is to combine gun and transport in a single machine, the armored car. For very light pieces and particular purposes, this has proved very satisfactory. It will never be applicable to artillery in general. Once in position, a gun is likely to remain there for some time, hours or days even, and there is no reason why its

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transport should share all its dangers. Besides, while the gun is relatively small and inconspicuous, the car is necessarily a huge affair, almost impossible to conceal.

During the past two years our military authorities have experimented with every form of mechanical transport found useful in Europe. Limited appropriations and the exigencies of border service have hampered the work, but a foundation has been laid for the development of mechanical transport along rational lines, and it is unlikely that our heavy artillery will ever take the field with any other.

Prior to the war the military authorities of all nations had estimated the amounts of ammunition necessary to be held on hand in the country ready for instant use. In the United States this was estimated at 1,856 rounds for each gun of the light artillery. That for the other calibres was in proportion. Estimates of other countries did not differ greatly from this. In addition there was a reserve provided for—a sort of reservoir to feed the visible supply. The size of the reservoir and its content at any time are carefully guarded secrets of every military nation.

The content of the reservoir is necessarily dependent upon two factors, the possible expenditure of ammunition and the probable rate of production of the factories in time of war. It must never be permitted to get very low.

In the present war the expenditures have exceeded all estimates, and evidence is abundant that the reservoirs of some of the Allies were quite empty at times. As early as the Battle of the Marne, batteries had expended in a single day the greater part of their proportion of the visible supply.

Evidently a total visible supply that could be exhausted in a couple of days was insufficient, and evidently, too, if the reservoir was not a capacious one and well filled, the factories necessary to maintain the supply would have to be enormous.

Before this war our estimates were for an amount of ammunition in reserve equal to the visible supply. Needless to say, that is no longer a secret, the estimates having undergone a radical revision. Based on the experience of belligerents, it has been estimated that, for an attack on the present intrenched lines of Europe carried to a depth of five miles, an expenditure of 5 million rounds per mile of front is necessary. Our visible supply, formerly calculated as sufficient for an army of a million men, would suffice for the attack of one mile!

To carry it further is useless. One simply becomes involved in figures hitherto unheard-of outside a census report. The mind has difficulty in grasping the situation; it is like a discussion of the distances involved in astronomical calculation!

Field artillery has always been a more or less "specialized" arm, and a highly important one, but in no previous war did its relative importance to other arms appear so great. Nor will this relative importance diminish. It alone can overcome the field works of the enemy, and the use of field works of scientific construction is certain in any war of the future.

Always a costly arm, it is more so now than ever, due to the complicated engines it uses. The equipment alone, exclusive of men and horses, for the artillery of a corps in our army, reaches a cost of more than $12,000,000, its visible supply of ammunition twice that amount. For an army of a million men the cost is more than $120,000,000; that of ammunition, more than $240,000,000. It need scarcely be said that such costly machinery of war *must* be provided in time of peace.

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The MONTH

News and Notes on Military Affairs

AN OUTSTANDING feature of the month, from the point of view of permanent policy, was the favorable report of the Chamberlain bill by the Senate Committee on Military Affairs. A critical commentary on this bill will be found elsewhere in this issue. On February 13th, following the introduction of the bill, Senator Borah proposed an amendment to repeal the National Guard provisions of the Hay law. He stated that "we cannot have a universal training system and a National Guard at the same time."

On February 10th the Commercial Club of Chicago, unquestionably the most influential organization of business men in the Central West, adopted the following resolutions:

Whereas, the object and policy of the Military Training Camps Association is to bring about a system of universal obligatory military training and equal service for the young men of the United States under exclusive Federal control, and

Whereas, the Association is committed to take such steps as may be deemed advisable to secure Federal legislation for a system of universal training, therefore be it

Resolved, that the members of the Commercial Club do hereby vote their approval of the purposes of the Military Training Camps Association as here stated:

"We commend the training camps as a step toward universal training and will, where and as possible, encourage and support the camps which it is proposed to hold in the West during the summer of 1917."

On February 11th resolutions were introduced in the Maine legislature declaring "in favor of any fair and equitable law establishing a system of universal military training under the direction of the Federal Government." The purpose is to allow the Maine Congressmen and Senators to hear from the "folks back home." It is an effort to test public opinion which could be followed to advantage in every state.

The membership of the American Red Cross increased from 22,500 on December 1, 1915, to about 286,000 on December 1, 1916. The extent of its work and organization has also been immensely developed.

Harvard University is establishing a well considered plan for training Reserve Officers. Before the latest crisis, difficulties had been encountered in forming a Training Corps Unit owing to the inflexible character of War Department regulations which did not suit special conditions at Harvard. Under the present stress it is understood that these difficulties have been adjusted. The work will be in charge of Captain Constant Cordier, U. S. A.

Yale and Princeton are proceeding on similar lines.

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The records of the Federal Militia Bureau show that the war strength of the organizations mustered into the Federal service was 267,925. The number actually furnished was 158,664, or 59.2 per cent. of war strength. In a letter to the Speaker of the House the Secretary of War stated that of the militia mustered into the Federal service, 71,834 were recruits without previous military experience.

The National Security League has started a campaign for signatures to a great petition for universal service. Now is the time of all others for the public to speak on the subject. This petition furnishes a concrete way for citizens to express their convictions.

An article in the Seventh (N. Y.) Regiment *Gazette* has excited wide comment. It is a frank condemnation of the Hay law from the militia point of view. The most striking statement is that "if the present legislation stands as it is to-day, it will take only four years before the National Guard is so reduced in numbers that it will be disbanded."

The enlisted peace strength of the Navy is about 74,000, war strength, 87,000. The actual strength, on February 15th, was about 58,000.

A meeting was held in Washington, on February 10th, to organize an intercollegiate intelligence bureau to list college students and graduates available for military duty and for similar auxiliary work. The meeting was called by Dean William McClellan of the University of Pennsylvania. Such an organization will have a field of usefulness, but the great need is for coördination of existing agencies rather than the creation of new ones.

Former President Taft has for the first time declared squarely for compulsory service. He finds no inconsistency between it and the League to Enforce Peace of which he is the head.

The Army Appropriation Bill was taken up in the House on February 15th. As reported from the Military Committee it carried $247,061,108, as compared with the War Department's estimate of $320,000,000, and last year's appropriation of $267,596,530. The bill is framed merely for the support of the peace establishment. The Committee has been criticized for cutting Department estimates. Examination of the committee hearings shows, however, that the Department estimated on the basis of paper strength under the Hay law, while the Committee assumed that the law would not produce the men and figured accordingly. This is no more than common sense. Votes of money do not create military forces.

The Judge Advocate General has ruled that active National Guard officers cannot be commissioned in the Officers' Reserve Corps. The basis of the decision is that since the purpose of the Reserve Corps is to produce a reserve it would be illogical to include officers already available for active service.

Sir Robert Borden recently informed the Canadian Parliament that Canadian enlistments had reached a total of 434,539, of which number 175,000 have seen active service, with 70,000 casualties.

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A memorandum issued by the War Department on February 9th calls attention to the need for reserve officers, less than 1,000 of whom have been commissioned. One difficulty is clearly the doubt in the minds of eligible men whether they might be used under a voluntary system with which they have no sympathy.

As showing the difficulty of obtaining physically sound men for military service, it appears that in the first nine months of 1916 there were 5,082 applicants in the Marine Corps Recruiting District of New York and that only 167 were accepted for enlistment.

The Adjutant General reports that 4,418 enlistments for the Regular Army were secured in December. This contrasts with 1,654 in December, 1915, and a monthly average of 2,121 in the fiscal year 1916. Taking into account normal losses, the rate is still too small to recruit the Army to authorized strength. Extensive recruiting efforts are being made, including bonuses to postmasters at $5. per recruit.

The Naval Training Association has announced plans for the 1917 cruises and camps. The first training period will begin June 11th. It is stated that the training will continue even in case of war, although the work would probably then be conducted in land camps. The naval volunteers are still obliged to pay their own expenses, no provision therefor having yet been made as in the case of the Army Citizens' Training Camps.

The assembly and drill requirements for the National Guard seem to leave out of account conditions in sparsely settled communities. Col. Donohue, of the Montana National Guard, recently stated that the law and regulations "indicate a sad lack of discernment of conditions" in Western states. He says:

"The body blow to the Guard was delivered in Circular No. 20 by the War Department, dated October 20, 1916. It means the exit of organized militia from the National Guard in the West, at least much sooner than if it were permitted to die a natural death."

CORRESPONDENCE

EDITOR OF NATIONAL SERVICE:

In my opinion the first number of NATIONAL SERVICE prophesies success. There is no doubt that it should be an open forum. The case for national service stands upon the rock of facts, and is strong enough to withstand all criticism. National service can only be injured by a policy which would deny the right of criticism to labor, socialism, and pacifism. Let them answer and be answered fully and freely in the columns of an organ which should be devoted to the discussion of the whole subject.

For what the opponents of national service mean when they define militarism can be justly criticised. Let it be understood that the military politics of the German General Staff is as much disliked by the proponents as by the opponents of national service. Let it be understood that the force which we propose to create, and the corps of

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officers which is to lead that force, is to be regarded as the servant, and not the master, of the Nation. Let it be understood that under national service the American armies of the future are able to be citizen armies technically trained, patriotic in the very nature of their organization, but devoted to no scheme whatever of military philosophy.

Very truly yours,

GERALD MORGAN.

EDITOR OF NATIONAL SERVICE:

I believe with all my heart in universal military training, for many reasons. One of them is that loyalty is a virtue which can be learned only in a common task. Men who serve together in preparation for defense will be bound together in a durable way, even as those who sing together or go to the same school or say the same creed. Nothing can take the place of the actual work together.

I lived some years ago in Switzerland, for more than three years continuously, and I realized that the Swiss system of universal training was the most democratic thing on earth. Hardly a soldier was seen in the streets, but every man had his obligation and none was spared because of birth or wealth. The burden of that service was light and there was no dragging a youth away from home to long years of service in camps or barracks whose influence in a professional army is doubtless pernicious. I have seen something of the armies of Germany, France, Italy, Russia, and England, and I am sure that only in the Swiss Army, before this great war, was there a truly democratic organization.

I hope that this magazine will thunder against militarism as much as against pacifism. We are not militarists merely because we realize that, when the final test comes, a man who wants to live must fight for his opinions. We want neither lands nor wealth of other nations, but we do want to lead our own lives in honor as well as in peace. The spirit of our American ancestors is not dead—not even in Americans: and as for the foreign-born of this country, but let them see that there is danger threatening that Ark of Opportunity, America, and they will spring to its defense as truly as did the men of Lexington and Valley Forge.

GEO. CLARKE COX.

EDITOR OF NATIONAL SERVICE:

Your new magazine, NATIONAL SERVICE, is exactly named. The cause of universal military and industrial service to which it is devoted represents a democratic aspiration which is opposed both in spirit and effect to a military autocracy. Opposition to the universal service for which you stand comes from those who properly oppose domination by a military class and is due to a misconception of universal service. Opponents to militarism should be advocates of universal service. The democratic universal training in arms and industry which you preach would be a fine thing for our country even though we could be positively assured that it would never again be necessary to fix a bayonet or fire a gun.

Yours truly,

EMORY R. BUCKNER.

EDITOR OF NATIONAL SERVICE:

I have received your magazine, which looks suspiciously high-brow, and not very national, judging from the contributors to the first number and from the Board of Editors.

Why don't you have some one from the West or South or both? And represent some of the fellows upon whom the burden of all fighting is heaviest? Still, I approve of your purpose.

"KENYON, '86."

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NATIONAL SERVICE

TRAINING CAMPS SUPPLEMENT

March, 1917

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By Captain Ralph M. Parker, U. S. Cavalry

(Address all communications to The Editor of Supplement, Military Training Publishing Corporation, 31 Nassau Street, New York City.)

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ENROLLMENT BLANK

I, _____ (Give name, initial, and surname), a _____ (Rank), of _____ (Section) in the Officers' Reserve Corps, or an attendant in the 191__ _____ (Month) _____ (No.) _____ (Street) _____ (Location) Camp, or an applicant for attendance in a 1917 training Camp, _____ (City and State) (Rule out words not applicable) desire to enroll for the Correspondence Course to be conducted by the Headquarters Eastern Department, U. S. Army, Governors Island, N.Y., and agree to follow conscientiously the course as prescribed, time and circumstances permitting.

(Signature) _____ (Use pen and ink)

Date _____, 1917

(Typewrite or print this blank, with the exception of signature)

Mail to Officer in Charge, Correspondence Course, Governors Island, New York

[*See "The Correspondence Course," page 31*]

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NATIONAL SERVICE

TRAINING CAMPS SUPPLEMENT

March, 1917

PROVISIONAL REGULATIONS

For Citizens' Training Camps—Part I

(AS APPROVED BY THE SECRETARY OF WAR)

ON JANUARY 13, 1917, the Adjutant General of the Army sent to the Commanding Generals of the four Departments Part I of the Provisional Regulations for Citizens' Training Camps for 1917.

Part II, containing the system of organization and standard courses of progressive instruction, Part III, outlining the course of training, and Part IV, the winter work, are to follow.

These regulations are made pursuant to the provisions of Section 54 of the National Defense Act, approved June 3, 1916.

The following is a summary of the principal features of Part I:

(1) "The War Department will organize and maintain such camps and will provide everything allowed by law necessary to the health, comfort, and advancement of those attending."

(2) *Objects.*—"The objects of these camps are to instruct and train the citizens of the country in the use of arms, tactical use of troops, to teach the military history and policy of the United States and the military conditions existing therein, and also to prepare those desiring commissions in the Officers' Reserve Corps for the duties pertaining to such commissions."

(3) *Qualifications.*—"Applicants must be citizens of the United States, or must have declared their intention of becoming citizens; must be of good moral character and sound physical condition; between the ages of 18 and 45 inclusive; and must be capable of undergoing the severe physical work of drill and manœuvre with the full infantry equipment; eyesight normal or corrected by glasses. Men between the ages of 45 and 55 years may attend, without expense to the United States for uniforms, transportation, or subsistence, upon obtaining permission from the Department Commander. In addition to the above-mentioned requirements, all applicants must have qualifications or experience at least equivalent to a high school education."

Applicants for admission to their first camp must be vouched for as to

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their good moral character by the holder of a Red, White, or Blue certificate, or by two other reputable citizens, or must present a satisfactory discharge from a Federal Training Camp for boys.

Unless compelled by unforeseen necessity to be discharged sooner, attendance must be for the full period of each Camp, and the rules and regulations prescribed for the government of the camp must be strictly observed. The Camp Commander is authorized to discharge any one under instruction before the termination of the camp when in his opinion such discharge is necessary; and he may withhold certificates and insignia in cases of misconduct or violation of regulations.

Upon reporting at camp and after passing a physical examination, the applicant is required to take the oath of enlistment for the full period of the camp, not exceeding thirty days.

(4) *Name.*—"Civilians attending shall be designated Federal Reserve Students."

(5) *Transportation.**—No transportation or reimbursement shall be given prior to taking the oath of enlistment. "Upon the successful completion of a camp, reimbursement will be made for expenses of transportation (railroad or boat fare) at Government rates prescribed for enlisted men of the Army, traveling without troops, by the most usual and direct route to and from the camp nearest the applicant's place of residence."

(6) *Subsistence* by the United States is given in kind while in camp.

(7) *Clothing**.—The Government will furnish the following: 1 Hat, Service; 1 Hat Cord, U. S. T. C.; 1 Coat, Service Cotton, O. D.; 2 Shirts, Flannel, O. D.; 2 Breeches, Service Cotton, O. D.; 1 Pair Leggins, Canvas; 1 Pair Shoes, Marching; 1 Set Numbers and Letters for Service Hat; 1 Badge, U. S. T. C. (for left arm); 2 Stripes, Service, Black Braid, (for each camp completed); 1 Set Marksmanship Insignia (for those qualifying). It is expected that this uniform will last during three camps.

Reserve Students will be required to provide themselves with the above-listed articles of uniform before coming to camp, when practicable.

"Each Reserve Student who purchases his uniform will be reimbursed by the United States the cost price of the same to the United States plus ten per centum, as follows: Upon completion of his first (Red) camp, one third; upon completion of his second (White) camp, one third; and upon completion of the third (Blue) camp, one third. If the Reserve Student attending camp does not elect to purchase his uniform he will be required to make a deposit of ten ($10.00) dollars to secure the United States against loss or damage other than the result of reasonable wear. Uniform will be issued to him by the Camp Quartermaster when it is not bought. Those not purchased must be returned to the Camp Quartermaster, to be cleaned and used subsequently."

"An accepted applicant, before reporting at camp, may purchase from any post or Quartermaster's Depot, or from any uniform and equipment dealer, the necessary articles of uniforms and clothing. All uniforms worn in camp must conform strictly to the approved Government pattern."

*NOTE: These rulings contemplate the purchase by the Reserve Student of his own transportation and uniforms, same to be reimbursed by the Government. But under a ruling of the Comptroller, the law, as it now stands, contemplates the issuance of both uniform and transportation "in kind," so that these two regulations may not be final. The War Department is trying to have the law amended so that the regulations, all quoted, may be followed, inasmuch as there would be much delay, expense, and inconvenience to fit and furnish the men with uniforms individually, either prior to their coming to camps or at the camps themselves, and also in the Government's undertaking to buy and supply the tickets for the men prior to their going. The essential fact is that, in either case, the Government will pay for uniforms and transportation, the only question being as to the manner of payment.

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(8) *Arms and Equipment.*—The Government will supply tentage, arms, equipment, etc. Each Reserve Student, however, will make a deposit of $10. to cover loss or damage, but proper refund will be made at the end of camp.

(9) *Camp Exchanges* may be established.

(10) *Post Offices* will be provided.

(11) *Courses of Instruction.*—A complete camp for any individual shall be four weeks of intensive training. A complete course shall consist of three such camps—each having advanced instruction over the preceding camp—and such additional winter instruction as may be prescribed.

The first camp for all Reserve Students shall be an Infantry Camp. Thereafter, as far as practicable, they will be trained for the arm or corps of the service for which they express preference and for which they seem best suited. A complete course of training in any arm or corps shall consist of three camps of that arm or corps.

The first camp in any arm or corps which the Reserve Student attends will be his "Red" Camp for that arm or corps; the second camp his "White" Camp; and the third camp his "Blue" Camp.

Students attending the Red and White Camps of any arm or corps will be grouped together in tactical organizations. Students of the Blue Camps will be grouped, as far as practicable, in separate organizations of their own arm or corps of the service, or, if there are sufficient organizations of the regular service available, they may be attached to these organizations.

Instruction in the Red Camp will be in the duties of the soldier.

The purpose of the White Camp is to give instruction in the duties of squad and platoon leaders. As far as practicable, students of this camp will be detailed for these duties by roster.

The purpose of the Blue Camp is to give instruction in the duties of Reserve Company officers. In all practical instructions the functions of command will be exercised by roster.

When a student has been assigned to a particular camp in a particular arm or corps, and has commenced to receive instruction therein, no transfers will be permitted during that camp.

Those who have satisfactorily completed two or more of the Federal Training Camps held for boys from 15 to 18 years inclusive may, upon reaching the age prescribed for the senior camps, be assigned to a White Camp. Credit will be given for the camp held in 1916.

In grouping students for assignment to training organizations, credit will be given for attendance at any of the training camps for civilians heretofore held under Federal supervision, as follows:

Those who have satisfactorily completed one or two of the training camps of any arm or corps in which the attendants were from 18 to 45 may be assigned to a White Camp of that arm or corps.

Those who have satisfactorily completed three or more camps, under the same conditions, may be assigned to a Blue Camp of that arm or corps.

When practicable and the appropriations permit, a student may attend two or three camps in the same year; reimbursement of transportation, however, will be furnished for one camp only.

In the discretion of the Department Commander, holders of Blue certificates who are not commissioned in the Officers' Reserve Corps may repeat courses of instruction in the White or Blue camps.

The courses of instruction will include the following:

(a) Principles of tactics, including: Advance and rear guards,

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patrols, outposts, and combat will be studied and explained in a series of talks, tactical walks, and war games. The practical application of the above will be carried out in the field.

(b) Military map-making and sketching will be explained and opportunities offered for practical work in that subject.

(c) The proper handling and use of the rifle will be taught, and experience given in actual firing with the service rifle and ammunition on the target range.

(d) Physical drill, marching, camping, tent-pitching, making and breaking camp, signalling, loading and unloading wagons, camp expedients, field cooking, camp sanitation, and first aid to the injured, personal hygiene, and care of troops in the field will be taught practically.

(e) The schedule of instruction will include a period of field manœuvres, during which such actual campaign conditions of march, bivouac, and combat will be followed as the assumed situation would exact.

(12) *Certificates of Service and Insignia.*—"Upon satisfactorily completing a prescribed camp, each student will receive a certificate of discharge and the authorized insignia."

(13) *Officers' Reserve Corps.*—"Upon completing the course of three camps, and the prescribed winter work, those students who desire commissions in the Officers' Reserve Corps will appear before examining boards, which shall examine the record of each applicant to determine his suitability for such commission, and shall give a practical examination in leading the tactical unit suitable to the grade for which he is undergoing examination, and in preparing the records and requisitions necessary in company, troop, or battery administration and supply. Those who have not completed the prescribed winter work shall be given the practical examination prescribed above, and, in addition, such additional oral and practical examination, under the provisions of G. O. No. 32, War Department, 1916, as the board may deem necessary."

"The courses of instruction herein prescribed for the Red, White, and Blue camps, together with the winter work, are designed to cover those subjects required for the examination of applicants for commissions as Reserve Officers not above the grade of Captain, as prescribed in G. O. No. 32, War Department, 1916, and applicants for commissions as Major shall, in addition to the above examination, be required to take the prescribed examinations for the grade of Major not included in the examination for company officer."

To those who demonstrate their fitness under the above provisions, commissions in the Officers' Reserve Corps will be issued for such grades as the board may decide, provided there be vacancies in such grades, the names being reported to the Adjutant General of the Army for the issue of the appropriate commissions.

"Each applicant examined for commission in a grade above that of Second Lieutenant will be required to state in writing whether or not he will accept a commission in a grade lower than that in which examined."

(14) *Typhoid Prophylaxis.*—All students under 45 are urged to take the typhoid prophylaxis.

(15) *Department Commanders.*—Department Commanders are charged with the organization and conduct of the camps within their own departments, in conformity with the foregoing regulations, and will designate an officer at their headquarters as the Officer in Charge of Training Camps

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(or whatever designation may be given the officer charged with this duty). They will see that proper publicity is given the camps, with a view to obtaining the largest attendance possible, and are authorized to make the necessary expenditures for the printing of advertising matter. They should cooperate with the Military Training Camps Association of the United States in recruiting for the camps. This Association has in the past been instrumental in obtaining many recruits for the camps held heretofore under Federal supervision, and it will be found that enrollment for the camps can be more readily augmented through civilian efforts.

(16) *Applications.*—Applications to attend will be addressed to the Officer in Charge of Training Camps of the Military Department in which the camp may be located, at the headquarters of said Military Department.

(17) *Blank Forms.*—The necessary blank forms and certificates will be furnished by the Adjutant General of the Army.

The CORRESPONDENCE COURSE

(Conducted under authority of Headquarters, Eastern Department, U. S. Army. Members of M. T. C. A. of U. S. who are subscribers to NATIONAL SERVICE *desiring to enroll are referred to the Enrollment Blank on the inside front cover)*

II. NOTES *on* MANUAL *for* COURT MARTIAL

By CAPTAIN RALPH M. PARKER
(2d. U. S. Cavalry)

MILITARY LAW

1. *Source:* The Constitution of the United States.
2. *Kinds:* (a) Military Government, which is military power exercised by a belligerent in occupied territory of the enemy. (Part of international law).

(b) Martial Law at Home, which is military power exercised in time of war, insurrection, or rebellion over persons and things not ordinarily subjected to it.

(c) Martial law as applied to the Army; that is, military power extending in time of war over persons in the military service, as to obligations arising out of such emergency and not falling within the domain of military law, not otherwise regulated by law.

Note: The last two divisions (b) and (c) are applications of the doctrine of necessity to a condition of war, and spring from the right of national self-preservation.

(d) Military law. This is the legal system that regulates the government of the military establishment. Its sources are written military law in the form of the Articles of War; the other statutory enactments pertaining to the military service; the Army Regulations; general and special orders

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and decisions promulgated by the War Department and by law of military commanders. The unwritten military law is the "custom of war," consisting of customs of service in time of peace and war.

3. *Military Tribunals:*
   (a) Military commissions and provost courts, for the trial of offenders against the laws of war and under martial law.
   (b) Courts-martial—general, special, and summary—for the trial of offenders against military law.
   (c) Courts of inquiry, for the examination of transactions or of accusations or imputations against officers or soldiers.

PERSONS SUBJECT TO MILITARY LAW

(a) All officers and soldiers belonging to the Regular Army of the United States, all volunteers from the dates of their muster or acceptance into the military service of the United States, and all other persons lawfully called, drafted, or ordered into, or to duty, or for training in the said service, from the dates they are required by the terms of the call, draft, or order to obey the same. That includes the Regular Army, entire, volunteers when mustered into the United States service, National Guard, from the date of the order and the draft into the federal service, members of the Officers' Reserve Corps when ordered for duty with the Army by the proper authority; Enlisted Reserve Corps when ordered into active service.
(b) Cadets of the United States Military Academy.
(c) Officers and soldiers of the Marine Corps when detached for service with the Army.
(d) Officers and enlisted men of the Medical Department of the Navy when on duty with marines which have been detached for duty with the Army.
(e) All retainers to the camp and all persons accompanying or serving with the armies of the United States without the territorial jurisdiction of the United States, and in time of war all such retainers and persons accompanying or serving with the armies in the field, both within and without the territorial jurisdiction of the United States.
(f) All persons under sentence of a court-martial.
(g) Army field and quartermaster field clerks.

CLASSIFICATION OF COURTS-MARTIAL

(a) General courts-martial.
(b) Special courts-martial.
(c) Summary courts-martial.

Composition: Officers in the military service of the United States, and in the Marine Corps when detached for duty with the Army.

Exceptions: No officer shall be eligible to sit as a member of a general or special court when he is the accuser or a witness for the prosecution; when there is only one officer present with a command, however, he shall be the summary court-martial of that command and shall try cases brought before him. Chaplains, veterinarians, dental surgeons, and second lieutenants, Quartermaster Corps, are not, in practice, detailed as members of courts-martial.

Number of Members: (a) General courts-martial. Any number of officers from 5 to 13, and shall not consist of less than 13 officers when that number can be convened without manifest injury to the service. The decision of the officer appointing the court is final as to the number which can be convened without manifest in-

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jury to the service. If a court is reduced to less than 5 members it will direct the Judge Advocate to report the facts to the convening authority and await his orders. Such report will always be made through the commanding officer of the post, command, or station where the court is sitting. The commanding officer in forwarding a report will submit the names of such officers in his command who are available for detail to the court.

(b) Special courts-martial.—Any number of officers from three to five inclusive.

(c) Summary courts-martial shall consist of one officer. The word "officer" means commissioned officer.

An officer suspended from rank is not eligible for detail upon a court. A retired officer performing active duty in time of war is eligible for courts-martial duty. At other times he is not eligible for such duty, except when placed in command of a post, or when assigned to recruiting duty, when he may act as summary court-martial.

Volunteer officers and officers of the Reserve Corps ordered into active service are eligible.

Note: No distinction exists between Regulars and other forces as to eligibility for courts-martial duty.

Unless unavoidable no officer shall be tried by officers inferior to him in rank. The convening authority decides as to whether or not it is avoidable.

AUTHORITIES FOR APPOINTING GENERAL COURTS-MARTIAL

(a) The President of the United States.

(b) The commanding officer of a territorial division.

(c) The commanding officer of a territorial department.

(d) The Superintendent of the Military Academy.

(e) The commanding officer of an army.

(f) The commanding officer of an army corps.

(g) The commanding officer of a (tactical) division.

(h) The commanding officer of a separate brigade.

(i) The commanding officer of any district or of any force or body of troops, when empowered by the President to do so.

Exceptions to the above: That when any of the foregoing commanders is the accuser or the prosecutor the court shall be appointed by superior competent authority. The Superintendent of the Military Academy cannot convene a court for the trial of an officer.

SPECIAL COURTS-MARTIAL

Authorities Competent to Appoint:

(a) The commanding officer of a district.

(b) The commanding officer of a garrison.

(c) The commanding officer of a fort.

(d) The commanding officer of a camp.

(e) The commanding officer of any place where troops are on duty.

(f) The commanding officer of a brigade.

(g) The commanding officer of a regiment.

(h) The commanding officer of a detached battalion.

(i) The commanding officer of any other detached command.

When any of the foregoing commanders is the accuser or the prosecutor, the court shall be appointed by a superior authority. The above-mentioned authorities may appoint special courts-martial for any portion of their commands.

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Rank of Appointing Authority: Authority to appoint courts-martial is entirely independent of any particular rank.

Commanding Officer as a Member: When but two officers in addition to the commanding officer are available, he will not detail himself as a member. In such a case if superior authority desires to appoint a special court-martial for such command, the commanding officer may be detailed as a member of the court.

SUMMARY COURTS-MARTIAL

Authorities Competent to Appoint:

(a) The commanding officer of a garrison.
(b) The commanding officer of a fort.
(c) The commanding officer of a camp.
(d) The commanding officer of any other place where troops are on duty.
(e) The commanding officer of a regiment.
(f) The commanding officer of a detached battalion.
(g) The commanding officer of a detached company.
(h) The commanding officer of any other detachment.

Superior authority may appoint a summary court in any case where deemed advisable. When more than one officer is present the commanding officer will not detail himself as a summary court.

JUDGE ADVOCATE

Power to Appoint: For each general or special court-martial the convening authority shall appoint a judge advocate, and for each general court-martial when necessary one or more assistant judge advocates.

JURISDICTION IN GENERAL

Jurisdiction Defined: The jurisdiction of a court-martial is its power to try and determine cases legally referred to it and, in case of a finding of guilty, to award a punishment for the offense within the prescribed limits.

NATURE OF COURTS-MARTIAL

Courts-martial form no part of the federal judicial system referred to in the Constitution of the United States. They are established under the constitutional power, however, to make rules for the government and regulation of the land forces, and are recognized in the provisions of the fifth amendment expressly exempting "cases arising in the land and naval forces" from the requirement as to presentment and indictment by grand jury. They are tribunals appointed by military orders issued under authority of law. Their jurisdiction is entirely criminal. They have no power to adjudge damage for personal injuries or private wrongs, nor to collect private debts. No appeal can be made from them, nor can they be set aside by any other court. The United States courts, however, may, on a writ of habeas corpus, inquire into the legality of detention of a person held by military authority, and may order him discharged if military jurisdiction does not exist. Sentences of courts-martial have no legal effect until they have received approval or confirmation of the proper commanding officer.

CONDITIONS NECESSARY TO SHOW JURISDICTION

(a) That it was convened by competent authority.
(b) That it was composed of persons legally competent.
(c) That it was vested with power to try the person and the offence.
(d) That its sentence was in accordance with law.

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PROCEDURE WHEN MILITARY AND CIVIL JURISDICTION ARE CONCURRENT

In accordance with the principle of comity as between the civil and military tribunals in cases of concurrent jurisdiction, that which first attaches in a particular case is entitled to proceed to its termination. This is, however, not an inflexible rule.

Cannot be divested by act of accused: A court-martial, having assumed jurisdiction of a case, cannot be prevented from discharging its duty by any wrongful act on the part of the accused. For instance, if the accused has escaped from military custody and furnishes no grounds for the court's not proceeding to a finding, the court should find, and, in the event of conviction, sentence him as in any other case. In such a case it is proper for the counsel to represent the accused as though he were present.

Jurisdiction not territorial: It extends to persons legally subject to it and to offences committed by them in any place whatsoever; i. e., in the case of an attaché committing an offence, when on foreign duty.

Jurisdiction when terminated: Usually military jurisdiction ceases when military persons sever their connection legally with the military service of the United States. There are exceptions to this, however, as follows:

(a) Persons being guilty of fraud, embezzlement, etc., though dismissed or discharged from the service continue to be liable for the act.

(b) When an officer in time of war, dismissed by the President, applies in writing for a trial on the grounds that he was wrongfully dismissed, the President shall convene a court-martial to try the officer on the charges for which he was dismissed. If the court-martial is not convened within six months of the making of the application by the officer, or after being tried the court does not award dismissal or death, the President's order of dismissal shall be void.

(c) All persons undergoing sentence of a court-martial.

(d) Where a soldier obtains a discharge by fraud.

(e) Even though discharged from a term of enlistment it does not relieve the soldier from the consequences of desertion committed during a term of enlistment.

JURISDICTION OF GENERAL COURTS-MARTIAL

As to Persons and Offences:

(a) Any person subject to military law, for

(b) Any crime or offence punishable under the Articles of War.

(c) Any other person subject to trial by military tribunals for violations of law of war.

Limits of Punishment: Punishment upon conviction is discretionary with a general court-martial, except

(a) When mandatory by law.

(b) When limited by order of the President.

(c) Death punishment can be imposed only when specifically authorized.

JURISDICTION OF SPECIAL COURTS-MARTIAL

As to Persons and Offences:

(1) Any person subject to military law, excepting

(a) Commissioned officers.

(b) Any person subject to military law belonging to a class excepted by the President.

(2) Any crime or offense not capital, punishable by Articles of War.

Note: Cadets and soldiers holding certificates of eligibility for promotion are ex-

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cepted from the jurisdiction of Special Courts-Martial.

The following are capital crimes and offences under the Articles of War:

(1) Peace offences:
  (a) Assaulting or disobeying a superior officer. (A.W. 64)
  (b) Mutiny or sedition. (A.W. 66)
  (c) Failure to suppress mutiny or sedition. (A.W. 67)

(2) War offences:
  (a) Desertion. (A.W. 58)
  (b) Advising or aiding another to desert. (A.W. 59)
  (c) Misbehavior before the enemy. (A.W. 75)
  (d) Subordinates compelling commander to surrender. (A.W. 76)
  (e) Improper use of countersign. (A.W. 77)
  (f) Forcing a safeguard. (A.W. 78)
  (g) Relieving, corresponding with or aiding the enemy. (A.W. 81)
  (h) Spying. (A.W. 82)
  (i) Misbehavior of sentinels. (A.W. 86)

Limits of Punishment: A special court-martial shall not have power to adjudge:
  (a) Dishonorable discharge, nor
  (b) Confinement in excess of six months, nor
  (c) Forfeiture of more than six months' pay.

Note: Reduction to the ranks of non-commissioned officers and reduction in classification of first-class privates may be adjudged by a special court-martial.

JURISDICTION OF SUMMARY COURTS-MARTIAL

As to Persons and Offences: Same as for special courts-martial except that a non-commissioned officer who objects to trial by a summary court will not be tried by such court except upon the order of authority competent to bring him before a general court-martial.

Any crime not capital, made punishable by the articles of war.

Limits of Punishment: A summary court shall not adjudge:
  (a) Dishonorable discharge;
  (b) Confinement in excess of three months, nor
  (c) Forfeiture of more than three months' pay.

Note: When a summary court officer is the commanding officer, no sentence of such summary court adjudging confinement or forfeiture or both, for a period in excess of one month, shall be carried into execution until approved by superior authority.

JURISDICTION OF OTHER MILITARY TRIBUNALS

When Concurrent with Courts-martial: The provisions of the Articles of War shall not be construed as depriving military commissions, provost courts, or other military tribunals of concurrent jurisdiction in respect to offenders or offences that may be lawfully tried by such tribunals.

ARRESTS AND CONFINEMENTS

(a) An officer charged with crime or serious offence shall be placed in arrest or may be placed in confinement by the same authority.
(b) A soldier charged with crime or serious offence shall be placed in confinement. When charged with a minor offence, he may be placed under arrest.
(c) Any other person subject to military law, charged with crime or serious offence, may be placed under arrest.

Note: Persons under arrest may be confined, may be restricted to barracks, quarters, or tents, except when such limits are extended by proper authority. An officer who breaks his arrest or escapes from confinement shall be dismissed or suffer such other punishment as a court-martial may direct. Other persons who escape

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from confinement or break arrest shall be punished as the court-martial may direct.

Who May Order Arrests:

(a) Only commanding officers are empowered to place officers in arrest except as provided in Article of War 68.

Note: Under A.W. 68 all officers or non-commissioned officers have power to part and quell all quarrels, frays, and disorder among persons subject to military law. They may order officers taking part in such fray or disorder into arrest and place other persons subject to military law in arrest or confinement as the case may require until their proper superior officer is acquainted with the facts. Whosoever refuses to obey such an officer or non-commissioned officer or threatens violence to him shall be punished as a court-martial may direct.

(b) Judge advocates of courts-martial have no power to place officers or soldiers in arrest who are about to be tried by a court or to compel the attendance of the accused before a court. These duties pertain to the convening authority, commanding officer, or officer having custody of the accused.

(c) Courts-martial have no control over the nature of the arrest or other status of restraint of the prisoner except in regard to his personal freedom in their presence. The commanding officer has entire control in such matters.

Arrest, How Executed: An officer is placed under arrest by his commanding officer in person or through another officer by a verbal or written order advising him that he is under arrest or will consider himself under arrest or words to that effect.

Status of Officer in Arrest: A person in arrest cannot exercise command. He will not wear a sword, nor visit officially his commanding officer or other superior officer, unless directed to do so. His applications and requests of every nature will be made in writing.

Arrest of Officer Without Preferring Charges: Officers will not be placed in arrest for light offenses. Usually the censure of the commanding officer will be sufficient. When the commanding officer places an officer in arrest without preferring charges, he will make a written report to his brigade or coast artillery district commander. Such commander will, if he thinks necessary, call upon the officer arrested for any explanation he may desire to make, will take such other action within his authority as he may think necessary, and forward all the papers with his recommendation to the department commander. The department commander will decide whether or not trial is advisable, and either convene a court for his trial or forward the papers to the War Department for file with the officer's record, or for other action. In the case where officers concerned do not belong to brigades or coast artillery district, the report will be made to the officer having court-martial jurisdiction.

Arrest of Medical Officer: In ordinary cases where inconvenience to the service will result from it, a medical officer will not be placed in arrest until a court-martial for his trial convenes.

Arrest and Confinement of Soldiers: Except under A.W. 68, or when restraint is necessary, no soldier will be confined without the order of an officer, who shall previously inquire into his offence. It is proper, however, for a company commander to delegate to non-commissioned officers of his company the power to place enlisted men in arrest as a means of restraint at the instant when restraint is necessary. Such action must be reported to the company commander at once.

Status of Non-Commissioned Officers in Arrest: A non-commissioned officer will not be confined in company with

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privates if it can be avoided. When in arrest, he cannot exercise authority or control over others. When in confinement he will do no work.

Abuse of Authority to Arrest: No person shall be continued in confinement more than 8 days, or until such time as a court-martial can be assembled. The officer by whose order he is arrested will see that he is furnished with a copy of the charges within 8 days after his arrest, and that he is brought to trial within 10 days thereafter, unless the necessities of the service prevent; in this event, he shall be brought to trial within 30 days after the expiration of the said 10 days. If the charges be not served, or the arrested person be not brought to trial, in accordance with the above, his arrest shall cease, but such persons having been released from arrest, under the provisions of Article 70, should be tried, when conditions permit, within twelve months after release from arrest. *Provided*, that in time of peace no person shall, against his objection, be brought to trial before a general court-martial within a period of 5 days subsequent to the service of the charges upon him.

Refusal to Receive and Keep Prisoners: No provost marshal or commander of a guard shall refuse to receive or keep any prisoner committed to his charge by an officer, provided the officer shall at the time deliver an account in writing, signed by himself, of the offence charged against the prisoner.

Note: Every commander of a guard is required to render a report to his commanding officer within 24 hours, or as soon as he is relieved from his guard, showing the names of prisoners confined, the charges against them, and the name of the officer committing them. The report ordinarily contained in the guard report book is sufficient.

Placing Prisoners in Irons: Prisoners shall not be placed in irons, except when the commanding officer considers the case a desperate and dangerous one. Such action and the circumstances will be reported immediately to the department or tactical division commander. When a prisoner is removed from irons a similar report is made to the same officers. When necessary to prevent the escape of a prisoner, he may be shackled or handcuffed when being transported from one place of confinement to another.

Releasing Prisoners Without Proper Authority: Any person in the military service who releases a prisoner without proper authority, or who through neglect or design suffers a prisoner to escape, shall be punished as the court-martial may direct.

ARREST OF DESERTERS BY CIVIL AUTHORITIES

Authority for Apprehension: Any civil officer having authority under the laws of the United States, or any state, territory, district, or possession of the United States, to arrest offenders, is authorized to arrest a deserter from the military service of the United States, and deliver him into the custody of the military authority.

Authority of Citizens Other Than Peace Officers to Arrest Deserters: The statute authorizing civil officers to apprehend deserters shall not be construed as taking away the authority for their apprehension by any citizen under an order or direction of a military officer. The offer of reward for the apprehension and delivery of a deserter, coupled with the act of Congress which provides for the payment of such a reward, is considered sufficient authority for the arrest of the deserter by a citizen.

Minority of Deserter: The right of the United States to arrest and bring to trial a deserter is paramount to

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any right of control over him by a parent on the ground of his minority.

PREPARATION OF CHARGES

Definitions: A charge corresponds to a civil indictment. It consists of two parts—the technical "charge," which describes the alleged crime or offence as a violation of a particular Article of War or other statute, and the "specification," which sets forth the facts constituting the same. The requisite of a charge is that it shall be laid under the proper Article of War or other statute; and the requisite of a specification is that it shall set forth in simple and concise language facts sufficient to constitute the particular offence and in such a manner as to enable a person of common understanding to know what is intended.

Who May Initiate Charges: Military charges, though commonly originating with military persons, may be initiated by civilians. The charge may likewise originate with enlisted men. The formal preferring of the charge, however, should be authenticated by the signature of a *commissioned* officer. Charges initiated by persons outside the Army, and based upon testimony not in the possession of the military authorities, should be sustained by affidavits or other reliable evidence.

Who May Prefer Charges: Any person may prefer charges. The fact that an officer is himself under charges, or under arrest, does not disqualify him from preferring charges.

Signing Charges: The officer preferring charges will sign his name following the last specification, adding his rank and organization in the Army. The signing of charges, like orders, with the name of an officer, adding "by order of" his commander, is unusual and not to be recommended. The signature forms no part of the charges, but will nevertheless be copied into the record, so that it may appear to the reviewing authority whether or not the officer preferring the charges sat as a member of the court.

Accumulation of Charges: The accumulation or saving up of charges through hostile animus on the part of the accuser is discountenanced by the sentiment of the service. It may be expedient, however, where offences are slight in themselves and it is desirable to exhibit a continued course of misconduct, to wait, before preferring charges, till a series of similar acts have been committed, provided the period be not unreasonably prolonged. In general, charges should be preferred and brought to trial immediately after the commission of the offence.

Duplication of Charges: Duplication of charges for the same act will be avoided except when, by reason of lack of definite information as to available evidence, it may be necessary to charge the same act or omission as constituting two or more distinct offences. Even though the court find the accused guilty in respect to two or more specifications describing the same act, punishment should only be given with reference to the act in its most serious aspect.

Consolidation of Charges: Ordinarily all the charges against the accused should be consolidated into one set of charges, and trial had upon them as a whole. To avoid taking up unnecessary time of a court with minor offenses they should not be joined with the more serious charges, *unless they serve to explain the circumstances surrounding the more serious charges.* For instance, charges for desertion should not ordinarily be joined with charges for losing property of small value; nor should charges for wilful disobedience of the orders of an officer ordinarily be joined with charges for an absence from a routine duty.

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Refusal to Submit to Medical Treatment: An officer or soldier may be charged for refusing to submit to a surgical operation or medical treatment at the hands of military authority if it is designed to restore or increase his fitness for service and is without risk of life. If the attending surgeon is in doubt as to whether the proposed operation involves risk of life, the soldier will not be tried, but will be discharged on the surgeon's certificate of disability, under the provisions of Army Regulations.

Joint Charges: Where two or more persons jointly and in pursuance of a common intent commit a crime or offence which can be committed by several persons acting in concert, they may be separately charged and tried for such crime or offence or may be jointly charged and jointly tried. The actual presence of all the accused persons at the actual commission of the offence is not necessary. All those who take part in the enterprise are equally guilty, though they may be absent from the actual place of commission of the offence. The fact that justice may require that different degrees of punishment be awarded to the different parties constitutes no objection to a joint prosecution.

Note: The mere fact of their committing the same offence together and at the same time, although material as going to show concert, does not necessarily establish it. For instance, the fact that several soldiers have absented themselves without leave, together and at the same time, does not necessarily prove any concert of action, but may be the result of their individually availing themselves of the same convenien opportunity for leaving. In the case o joint charges, the right of challenge is ex ercised by each of the accused persons sep arately.

Charges Not to be Preferred Upon Uncorroborated Confession: In the case of a confession, charges should not be preferred for an offence unless there is some evidence other than the confession of the accused that the offence has been committed. This applies particularly in cases of fraudulent enlistment. The mere confession by the accused that he had prior service, or was disqualified for enlistment at the time he enlisted and concealed that fact should not be made the basis of charges unless there is something else confirming his confession. The case should be investigated, however.

Charges for Private Indebtedness: Military authorities will not attempt to discipline officers or soldiers for failure to pay disputed private indebtedness or claims; nor will the military authorities attempt to decide upon such disputed indebtedness or claim. If the indebtedness is disputed the creditor should resort to civil courts. If, however, an officer or soldier reflects discredit upon the service by his failure to pay just indebtedness, he may be brought to trial for violations of A. W. 95, or A. W. 96, as the case may require, but no action will be taken by the military authorities to enforce the payment of the debt. The action of the court in this case would be purely disciplinary, and not the act of a court of equity.

Numbering Charges and Specifications: Where there are several specifications which are violations of one Article of War, the usual procedure is to place them all under one charge, so that they will be known as 1st, 2d, 3d, 4th, etc., specification, "such" Article of War. Where there are several Articles of War violated, a charge will be made for each.

Additional Charges: New and separate charges which are preferred after others have been preferred are known as "additional charges." Such charges may relate to acts which were not

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known by the authorities at the time of the preferring of the original charges; or they may, as is more frequent, arise from acts of the accused subsequent to his arrest or confinement on the original charges. Additional charges must be brought to trial as such, at the same time as the original charges. After the court has been duly sworn to try the original charges, any charges that arise must be the subject of a separate trial.

ACTION UPON CHARGES

Submission of Charges: All charges for trial by court-martial will be prepared in triplicate, using the prescribed charge sheet as the first sheet and such additional sheets of ordinary paper as are required. Charges will be accompanied by the following, except when trial is to be had by summary court:

(a) A brief statement of the substance of the evidence available, both for the prosecution and for the defense, and also any probable evidence.

(b) In the case of a soldier, by properly authenticated evidence of previous convictions, if any, of an offence or offences committed by him during his current enlistment and within one year next preceding the date of the alleged commission of the offences set forth in the charges. They will be forwarded by the officer preferring the charges to the commanding officer exercising summary court jurisdiction over the command to which the accused belongs. This officer and every superior commander into whose hands they come will either refer them to a court-martial within his jurisdiction, or forward them to the next superior authority exercising court-martial jurisdiction over the command to which the accused belongs, or otherwise dispose of them as the case may require.

Investigation of Charges: If the first commanding officer exercising summary court-martial jurisdiction desires to forward the charges to superior authority, he will, before doing so, investigate them himself or cause them to be investigated by some officer, other than the one who preferred the charges. The officer investigating the charges will give the accused ample opportunity to make any statement, offer any evidence, or present any matter in connection with the accusation against him. Should the accused desire to submit nothing, the indorsement will so state. The indorsement forwarding the charges to superior authority will include the following:

(a) Name of officer who investigated the charges.

(b) Opinion of both such officer and himself as to whether the several charges can be sustained.

(c) The substance of such material statement, if any, as the accused may have voluntarily made in connection with the case during the investigation thereof.

(d) A summary of the extenuating circumstances, if any, connected with the case.

(e) His recommendation of action to be taken.

Prompt Action Required: It is the duty of those charged with court-martial jurisdiction to bring the case to trial as soon as practically consistent with the proper administration of the case.

Determination of Proper Trial Court: When an officer who exercises court-martial jurisdiction receives charges against an enlisted man it is his duty to consider whether they shall be tried by general, special, or summary court-martial. In deciding as to which court

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shall try the case, due consideration must be given to the seriousness of the offence and the limits of punishment prescribed for the different courts. No fixed rule can be laid down and the matter should be decided, in the best judgment of the commander concerned, in accordance with law.

Disposition of Copies of Charges:

(a) When trial is to be had by summary court the charges will be completed as the record of the trial. A copy of the record thus completed will be sent to the company commander, and the other copy, likewise completed, will be transmitted with the least practicable delay to the officer exercising general court-martial jurisdiction over the command, in whose office it will be filed, and at the end of two years it will be destroyed.

(b) When trial is to be had by special or general court-martial, the charges and one copy thereof will be referred to the trial judge advocate (the judge advocate of the court-martial which tries the case). The trial judge advocate will furnish the accused or his counsel with a copy, and the other copy will be retained in the office of the officer appointing the court. The top fold of this copy of the charge sheet, in case of trial by a general court-martial, will be detached at the proper time and forwarded with the record of the trial to the Judge Advocate General of the Army.

Service of Charges upon Accused: In order that the accused may have time to prepare for his defense it is provided that in time of peace no person shall, against his objection, be brought to trial before a general court-martial within a period of five days subsequent to the service of charges upon him.

THE MEMBERS

Place and Time of Meeting: The authority appointing general or special courts-martial designates the place for holding the court, the hour of meeting, the members of the court, and the judge advocate. A general or special court-martial assembles at its first session at the time and place designated in the order convening it; thereafter, according to adjournment. A member of a court-martial stationed at a place where the court sits is liable to duty with his command during adjournment, subject to the orders of the convening authority. The court determines the hours of holding this session.

Uniform: It is customary for members of general courts-martial and witnesses to appear in court in dress uniform with side arms. The judge advocate should wear the uniform of the court without side arms, the accused is usually required to appear in dress uniform, if he possesses one, and if the court is so uniformed. The president of the court, however, may decide that it is impracticable for the court to sit in dress uniform and direct that they appear in service uniform. When practicable a deserter will be tried in the clothing in which he was apprehended.

Call to Order: When the court is ready to proceed, it is called to order by the president.

Sitting of the Court: Members will be seated according to rank, alternately to the right and left of the president. The judge advocate, the accused, and his counsel are seated so as to be most easily seen and heard by all the members of the court. The reporter should be seated near the judge advocate.

Roll Call: At the beginning of each session the judge advocate verifies the presence or absence of the members of

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the court by calling each officer's name or by informally noting his presence or absence. This verification is noted in the record.

Introduction of the Accused: When the accused and his counsel appear before the court for the first time, the judge advocate will announce their names to the court.

Absence of a Member: When a member of a court-martial has reason to believe that he will, for a proper reason, be absent from a session of the court, he will inform the judge advocate accordingly. When a member of a court-martial is absent from a session thereof, the judge advocate will cause that fact, and the reason for the absence, to be shown in the record of the proceedings. If the reason be unknown it will be so stated. In the case of absence the convening authority will take such action as he deems proper.

Voting: Members of a general or special court-martial, in giving their votes, shall begin with the junior in rank. A tie vote on the *findings* is a vote of "not guilty"; a tie vote on any question is the equivalent of a vote in the negative. When the offence charged includes a minor offence, voting will be first had upon the major offence. All convictions and sentences (other than those involving death), whether by general or special court-martial, may be determined by a majority of the members present. Refusal to vote on any question arising during the proceedings constitutes conduct to the prejudice of good order and military discipline, and is punishable under A. W. 96.

Decorum to be Observed: Trials before courts-martial will be conducted with the decorum observed in civil courts. Members should be dignified and attentive. Reading of newspapers or other evidence of inattention on the part of members during session is a neglect of duty to the prejudice of good order and military discipline. The president of the court will admonish against improper conduct on the part of members, and prefer charges when necessary.

Punishment of Members: A court-martial cannot punish its own members. Members are liable to charges and trial for improper conduct as for any other offence against military discipline.

The Opening of the Case, or Arraignment: During the reading of the order appointing the court and the arraignment of the accused, the judge advocate, the accused, and his counsel will stand. The arraignment consists of reading to the court and to the accused the charges upon which the accused is to be tried. While the court and the judge advocate are being sworn, all persons concerned with the trial, including any spectators present, will stand. When the reporter, an interpreter, or a witness is being sworn, he and the judge advocate will stand. When the judge advocate, the accused, or his counsel addresses the court, he will rise.

Control of Court Over Accused: A court-martial has no control over the nature of the arrest or other status of restraint of a prisoner except as regards his personal freedom in its presence.

Note. Prisoners will not be brought before a court-martial in irons, unless it be necessary as a means of restraint to prevent violence or escape. However, the fact that a prisoner has been tried in irons cannot in any case affect the validity of the proceedings.

Duties of the President: The president of the court will not be announced. The officer senior in rank present will act as such. The president does not by virtue of being such exercise command of any kind. As the

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organ of the court he directs the necessary regular and proper conduct of the proceedings. Should a member of the court disobey an order of the president, he is not chargeable under the Sixty-fourth Article of War, but may be court-martialed for conduct to the prejudice of good order and military discipline. Neither the court nor the president may place the judge advocate in arrest. The president has an equal vote with other members in deciding all questions. He speaks and acts for the court in every instance when necessary. He has no authority to open or close the court, or make any ruling whatsoever, without the acquiescence of the court or by custom of the service. He administers the oath of the judge advocate and authenticates all acts, orders, and proceedings of the court by his signature. It is his duty to insure prompt trial and disposition of all charges referred to the court for trial.

(*"Notes on Manual for Court Martial" will be continued in next number.*)

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NATIONAL SERVICE

April 1917

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An Incident on the Western Front . . . . . Arnold Whitridge

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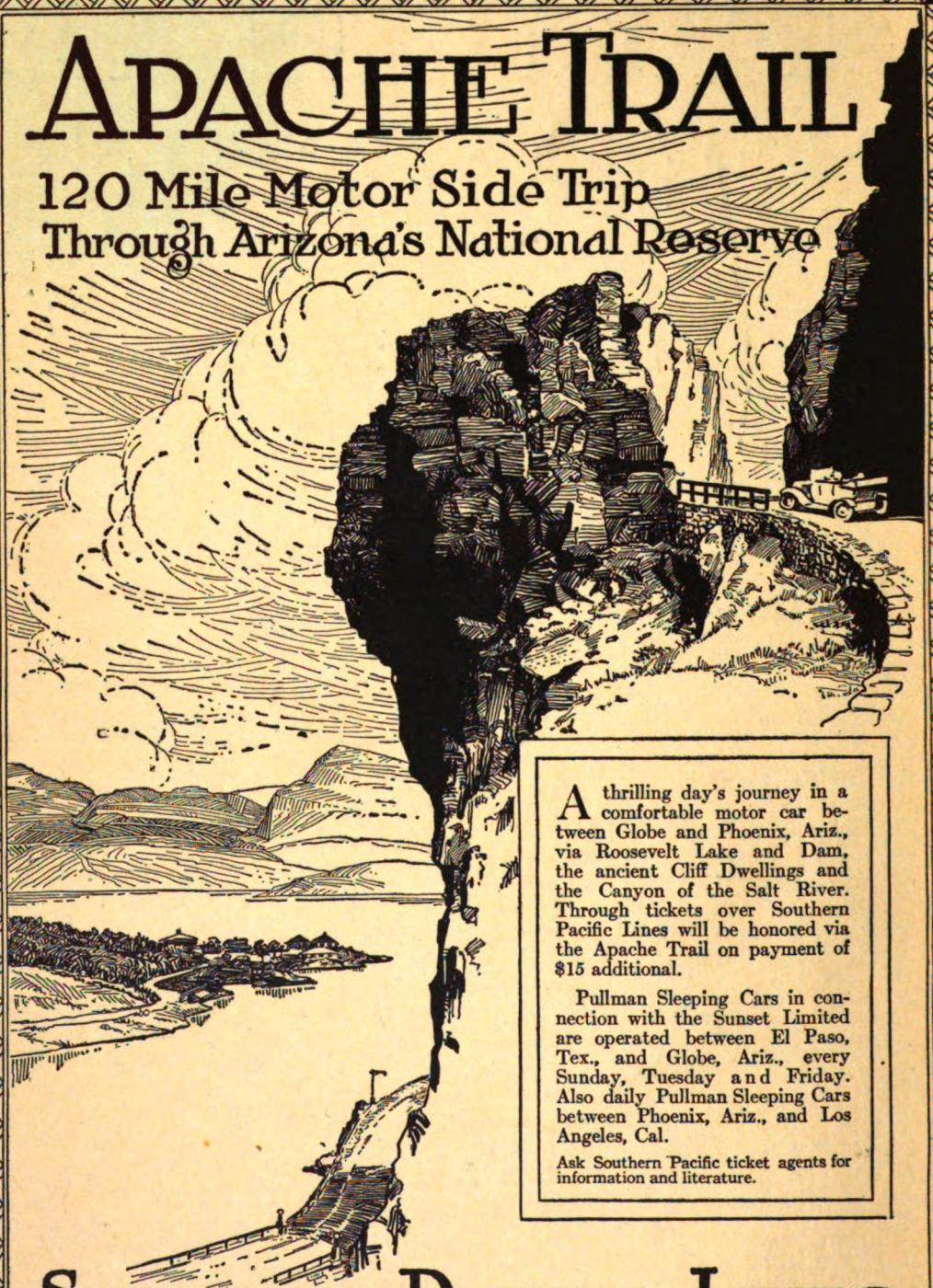

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NATIONAL SERVICE

April, 1917

EDITORIALS

THE GENERAL STAFF BILL

ELSEWHERE in this number we print the main part of the "Statement of a System of National Defense Based upon Universal Liability to Military Training and Service," prepared by the War College Division of the General Staff and recently transmitted to Congress. The statement is designed to accompany a draft of a universal training and service bill. This able document embodies a comprehensive plan for the creation of a national army recruited upon a universal basis, and should be read by every one who would understand the principles underlying the organization of a large military force.

Briefly, the General Staff plan provides for a national army of 4,000,000 men, to consist of a First Reserve of 1,500,000 capable of immediate mobilization, a Second Reserve of 1,500,000 capable of mobilization within ninety days after the outbreak of hostilities, and an unorganized reserve of 1,000,000 whose organization prior to the existence of a national emergency is not considered necessary. In addition, provision is made for a permanent force of about 97,000 for the oversea garrisons and a frontier force of some 29,000 to meet all home emergencies which do not warrant the mobilization of the national army.

Service in the First Reserve, as planned, will begin in the nineteenth year with eleven months' continuous training, supplemented by two repetition courses, each of two weeks' duration, one in the twentieth and one in the twenty-first year. Liability for service in the First Reserve extends for four years and one month, in the Second Reserve for seven years, and thereafter until the age of forty-five in the Unorganized Reserves. In case of war the First and Second Reserves would be called out in the order named, and as the need arose the Unorganized Reserves would be summoned by classes according to age, beginning with the youngest.

Of the 1,000,000 young men who annually reach the nineteenth year it is estimated that about 580,000, or 58 per cent., are available for military duty. Deducting 60,000 for training in the Navy and Marine Corps and 20,000 for the Coast Artillery, 500,000 remain as the annual contingent for

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the mobile field army. Assuming the annual loss due to disabilities and exemptions to be 10 per cent., at the end of the fourth year of the operation of the plan the First Reserve will contain 1,547,550 trained men, and at the conclusion of the eleventh year the Second Reserve will have attained its full strength of 1,500,000. At the end of the thirteenth year the complete First and Second Reserves will be supplemented by about 1,000,000 men either undergoing training or in the Unorganized Reserves.

Under the provisions of the plan the country will be divided into 48 reserve divisional areas and each three of these areas will comprise one divisional training area. Within each divisional training area a training division will be formed, 16 in all, under a decentralized but federal system of administration. Each training division will train approximately 31,250 recruits a year and supply three reserve divisions, so that after the plan is permanently under way each group of three reserve divisions will be capable of mobilizing an army corps of 90,000 men in the First Reserve and a similar army corps in the Second Reserve, each with a surplus to form depots.

Each training division will be subdivided into training brigades and training regiments. The permanent personnel of a typical infantry training regiment will comprise 51 commissioned officers and 457 enlisted men, and each regiment will train annually approximately 2,000 recruits. It is indicated that while experience may justify a reduction of the training personnel, the number cannot safely be reduced at the start owing to the fact that a material proportion of the training personnel will have had but limited experience.

The training season would begin on November 1st annually and extend to September 30th of the following year. The winter months would be devoted to the physical development and individual training of the recruits, this instruction being given, whenever possible, out of doors. In the spring and summer the school of the company, battalion, regiment, and brigade would be taken up in turn. During the annual period from September 15th to September 30th the recruits finishing their training would be absorbed in their reserve units with the trained reservists engaging in their repetition courses, thereby furnishing an opportunity to test the capacity for mobilization of the First Reserve.

While universal military service is based upon an obligation of citizenship and is, therefore, incompatible with the theory of pay for preparation to fulfil this duty, the General Staff recommends a monthly allowance during training periods in order to enable all recruits to meet personal expenses equally. The sum of $5 per month, or one third of the pay of a private in the Regular Army, is suggested.

The problem of securing the necessary officers both for the permanent and training forces and for the reserve organizations is dealt with at length. Upward of 17,000 officers will be required for the permanent establishment alone, and these will be obtained from properly qualified officers and enlisted men of the National Guard, former officers and enlisted men of the Regular Army and volunteers, members of the Officers' Reserve and Reserve Officers' Training Corps, graduates and students of military schools and colleges, and other properly qualified citizens who have had military experience. Those who do not accept commissions in the permanent

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establishment will be received into the Reserve Officers' Corps and assigned to the First and Second Reserves according to their qualifications. When the plan is in permanent operation, reserve officers will normally be recruited from among the trained reservists. During service in the training units their capacity and aptitude will be noted and the more promising material will be designated for promotion, first as non-commissioned and, if efficient, later as commissioned officers. This, we take it, will provide equal opportunity for all recruits to become officers, and the best men will emerge for reasons of efficiency alone, regardless of position or influence. A special enlistment period of one year in the training forces is calculated to produce the necessary enlisted training personnel.

The closing portions of the statement discuss the method of registration of all persons liable to military service and its enforcement, physical examination, and the classification and disposition of those examined, and finally the important matter of exemptions. The exemptions proposed are few. All physically or mentally unfit persons are, of course, exempt from service. All other exemptions are considered in the light of postponement of liability until such time as the conditions upon which the exemptions are based shall have lapsed. These conditional exemptions include federal and state officials and employees whose services are indispensable and persons who are the sole support of helpless dependents. It is, of course, recognized that service in time of war is just as necessary in the factory as in the field. Exemptions to "conscientious objectors" and to those whose religion forbids participation in the defense of their country are quite rightly not included.

The War College Division, working under great stress, has produced in the minimum of time a most important document. It is the first detailed plan for a universal service army to be made public. It marks a long step in the right direction. The skeleton organization proposed, under which all available officers and non-commissioned officers, both active and reserve, could be assigned to definitely localized units, would guarantee at least trained leaders for emergency levies of raw recruits should the people, in their blindness, continue to rely upon the volunteer system. This country has never had a military policy. We have never put our house of defense in order. The recent disclosures of German intrigue on the American continent have once more proved that our much-cherished isolation has gone glimmering. Now is the time to build. The General Staff has outlined the professional plan. Let this far-reaching document receive the wide publicity and discussion it deserves.

UNIVERSAL TRAINING AND SERVICE FOR WHAT?

THIS is a legitimate question. It deserves a specific answer.

The question divides into a temporary and permanent aspect. Why do we need to train our youth now and why do we need to do so as a permanent measure?

As to the present situation can there be any doubt? We have made an enemy of the most powerful military nation in the world and tremble on the brink of armed conflict with that Power. We confront the situation without trained land forces of any significance, considering the scale of modern war. Such forces we cannot get save by a comprehensive plan

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for the training and service of our young men. Experience and common sense have taught us and are teaching us this every day. We need mandatory training and service *now* to safeguard our people and institutions from attack during and immediately after the Great War.

It is yet more important, however, to consider the problem from the standpoint of permanent policy. Broadly speaking, three lines of policy are open to us. We may elect to stand alone, untied by alliances or leagues of peace, on the theory that in the long run we shall thereby best preserve our institutions and our peace. We may ally ourselves tacitly or openly with the other democracies of the world and stand with them to uphold ideals of government and individual liberty threatened by governments based on other principles. And finally we may endeavor to participate in a great league of all the powers to preserve the peace of the world. Which course this Government should follow or can follow, no man can yet predict, for it is not merely a matter of choice but of world events largely beyond the control of our people. The point we make is that no matter which of these alternatives is chosen or forced upon us, a nation trained to arms is essential.

If we stand alone or depend only on the help of part of the governments of the world to uphold the theory and reality of democratic institutions, it needs no argument that security demands a citizenship able and willing to do its part. The spectacle of the Great War and particularly the experience of England has enforced that lesson in a way never to be forgotten. But this is equally true if the dream of a world league is realized. We can be admitted to such a league on no terms other than a bona fide and real contribution of force. This means not merely a contribution of mercenary forces but a trained citizenship ready to back the guarantees of the league. What President Eliot recently wrote is profoundly true:

> The United States cannot take a worthy part in that alliance unless it visibly possesses a citizens' army—not a standing army—counted by millions, perfectly equipped, always on call, and capable of rendering with skill and devotion any of the military services which any or all of the Entente Allies have been called on to perform.
>
> It is a dangerous delusion that international peace is to be preserved at the close of the present war by any organization—Parliament, court, or conference—which is not supported by an overwhelming international force, both on sea and on land.

Alone, in alliance with part or all of the Powers to compel peace—it matters not what road we travel. Until the birth of a new order, devoutly to be hoped for but not yet in sight, we must stand ready to do our share. And how shall we contribute that share under modern conditions unless by the service of our men trained and accustomed to arms?

THE CONNECTICUT MILITARY CENSUS

WRITING in the February num of NATIONAL SERVICE on England's lesson in the Great War, Mr. Sydney Brooks said that "for a country like America, the first and essential starting point in any programme of preparedness is the completion of a roster that will show at once the numbers, addresses, and occupations of all the men and women of military age in each state. Get that done—and each state could tell about at a glance which men could be spared for

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the Army and which ought to be retained in the trades that support the main fabric of the Nation's commerce or furnish the material of war."

Connecticut is the first state to carry out this most essential programme. Under the leadership of the governor, a complete census is being taken of the man-power and industrial resources of the state. The towns and cities constitute the census units, the census agents are all volunteers, and the necessary expenses are borne by each district canvassed. All information secured is to be tabulated in code and placed under the personal supervision of the governor of the state, to be used only in the event of war.

From all males of sixteen years and over data is sought which is necessary to an equitable distribution of the military burden. The questions include age, height, weight, physical condition, citizenship, occupation, whether married or single, number of dependents, military or naval training, embracing knowledge of horses, automobiles, boats, steam engines, electricity, telegraphy, etc. The state will have complete information as to every individual living within its borders. Should the Congress enact a universal training law and call out a certain class or classes according to age, Connecticut would know at a glance who would go. Similarly, in time of need, those best fitted for certain tasks would be given an opportunity to perform the work to which they are best suited.

The four thousand-odd industrial plants throughout the state are also to be canvassed with a view to ascertaining what particular use each could be to the Government in the event of war. For each plant information will be tabulated regarding its location, the principal materials used and products of manufacture, and the number of employees, both male and female, together with the number needed to a single shift.

Connecticut has led the way in a most important field of preparation. She has realized that to meet conditions of modern war there must be organization not only of the troops of the fighting line but of that vastly larger army which equips, feeds, transports, and cares for the men at the front. Where Connecticut has led, every state in the Union should follow.

BUT WHERE ARE THE MEN?

TO SAY that it involves an element of the grotesque implies no disparagement of the good work that is being done by various official commissions and civilian committees in appraising our material resources. We arrange to mobilize the telephone service, trained nurses, medical supplies, industries, transportation—everything but fighting men, without whom all else is futile. We cannot agree with the Secretary of War when he says that "transportation is the next important element to the number and size of guns," and ignores the question of trained troops to be transported and trained men to fire the guns. While we continue to talk, our land forces do not increase nor is any effective plan even proposed by the Government to increase them. We will soon be in a state of mind where committee meetings will be considered sufficient to win campaigns. General Kuhn, president of the Army War College, must have had this state of affairs in mind when he said the other day:

As I look over the field I find all kinds of societies, associations, and committees for mobilizing anything and everything;

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industries, food, nitrates, and transportation, even young ladies who can apply first aid to either right or left leg, but not to both. In short, the move for preparedness is bearing some fruit, but alas! in one direction only. It is all directed toward mobilization of our material resources. However great a part material resources and material have played and are playing in this war, one fact must not be overlooked, and that is the fighting man. He is just as important and necessary as ever, and the demands that will be made upon his nerves and endurance are greater than ever before. We need and must have men, millions of them, and they must be trained thoroughly; trained to meet the grueling requirements of modern warfare. How can we get them? Only through the American people, who are their own masters.

Don't stop the committee meetings, but give us a plan to train troops and put it in effect! Let us avoid manless guns as well as gunless men.

HAPPY-GO-LUCKY ARMY LAWS

By Augustus P. Gardner

FOR several years up to the last session of Congress Chairman Hay presided over the twenty-two gentlemen who comprise the Committee on Military Affairs of the House of Representatives. Chairman Hay knows as much about military law as any half dozen of the other twenty-two gentlemen of the Committee put together. As Chairman of the Military Committee Mr. Hay has been a man of determination and industry. Is it any wonder that for years he has controlled the military legislation of Congress?

What is the key which unlocks the mystery of Chairman Hay's persistent opposition to a real army? Is it because he was a "pork-barreler"? Only in the same sense in which all Congressmen are and must be "pork-barrelers." "Pork," gentle reader, is a projected improvement, such as a post office building or a deeper river channel, in somebody else's district. Is it because Hay is secretly a hyphenate that he fought the Army? He is no more a hypenate than T.R. is a hyphenate. Was he afraid that an army would oppress the people? No more than he was afraid that a mouse would oppress a cat. What is the answer to the conundrum? The answer is that Hay was firmly convinced that preparedness is all rubbish and that there is no more chance of our getting into war than there is of our persuading the South to let the Negro vote. Shift yourself for a moment so that you get the former Chairman's point of view. Admit to yourself that he may have been genuine in his belief that war is practically impossible, reexamine the question from his angle, and you will quickly discover that a logical consecutive thread runs through all his acts. I believe I do Mr. Hay no injustice when I say that from the time he came into power his object had been to give the American people the smallest Regular Army which we would tolerate. On the other hand, I believe I do him no more than justice when I say that he has expended a vast amount of intelligent, unremitting

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labor in trying to make that diminutive Regular Army the best which could be had for the price.

But strong as Mr. Hay was, he was forced to make concessions in 1916. The number of enlisted men of the line of the Regular Army was increased on paper from a maximum of 100,000 to a maximum of 175,000. By the terms of the new law, this increase is to be obtained in five annual instalments and is to be fully completed not earlier than 1921. Even at that late date we are to attain this modest strength for our army only if we Congressmen from time to time see fit to appropriate the requisite money and if our constituents from time to time see fit to enlist for the magnificent stipend of $15 a month with food, clothing, and courts martial furnished free of charge. Hay didn't like that increase in the Regular Army; but he could not help himself. Neither did he like it when, during last summer, we appropriated $35,000,000 for our field artillery and its ammunition. In comparison with our previous expenditures along that line this was as if a squirrel had suddenly expanded into an elephant. In view of our necessities, on the other hand, we were like unto him who takes nine bites at a single cherry, for the War Department has decided that we must accumulate against the possible outbreak of war field artillery and field artillery ammunition to no less a value than $324,000,000. Last summer we appropriated less than one ninth of that amount and we trusted to luck that war would not break out in the next nine years.

So much for our steps in the right direction. Meanwhile we made a Brobdingnagian stride in the wrong direction when we pretended to federalize the militia or National Guard, as it is now called, by the simple expedient of making Uncle Sam its paymaster. Secretary Garrison was absolutely right when he told the country that the militia to be efficient must be controlled by the Nation, not controlled as it is at present by 48 different Adjutants General in 48 different state capitols.*

It is true that the details of the Secretary's plan for a continental army were not workable, but his fundamental principle was sound. What he asked for was a complete divorce between the National Guard and the state governments. What Congress gave us wasn't even a legal separation, but a decree requiring the Nation to pay alimony. After nearly a century and a half of unhappy experience with little separate state amateur armies, we have by the new army law done our best to make them permanent.

What did we actually do about the militia when we passed the National Defense Act of 1916, as the Hay law is now called? Furthermore, what induced us to do it, whatever it was that we did? To understand the answer to those two questions you must turn to the Constitution of the United States. It provides two different ways in which Uncle Sam can raise citizen armies. Under Section 8 of Article 1 of the Federal Constitution, Congress is given the power "to provide for organizing, arming, and disciplining the militia, and for governing such part of them as may be employed in the service of the United States, reserving to the states respectively the appointment of the officers, and the authority of training the militia according to the discipline prescribed by Congress." This is known as the militia clause of the Constitution. It is under this clause that our militia has always been organized, and it is

[*At the moment of writing only a part of the National Guard is under state control. The troops now on the border are under national control, having been called into the service of the United States for the purpose of repelling invasion.]

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under this clause that our National Guard is to-day organized in pursuance of the policy advocated by Chairman Hay and by the Legislative Committee of the National Guard Association.

On the other hand, by another clause of Section 8, Article 1, Congress is given the power "to raise and support armies." This is known as the Army Clause of the Constitution. Under this clause our Regular Army is organized. Under it the greater part of the volunteer army with which we fought the Civil War was organized. Under it the Spanish War volunteers and the Philippine volunteers were raised. Under it Secretary Garrison proposed to Congress that we should create a federalized National Guard, which he denominated "The Continental Army."

The fundamental objections to organizing a citizen army under the militia clause of the Constitution are these:—

First. The citizen army cannot be called upon to serve outside the United States.

Second. The selection of officers rests in the hands of the 48 states of the Union.

Third. The training of the national guard is entrusted to 48 different State Adjutants General instead of being federalized under a single national authority.

We had a small militia or National Guard at the outbreak of the Spanish War. It was poorly trained, but for the most part composed of sound stuff. But under the Constitution the militia could not be sent to Cuba. The result was that when President McKinley called for volunteers Congress was obliged to pass a very clumsy piece of legislation under which each militiaman must volunteer, if he wished to serve the Nation. The militia officers up to and including the grade of colonel were to be given volunteer commissions corresponding to their militia rank. That clumsy plan worked after a fashion because no great force was needed and up to that time no crusade against stout-heartedness had yet found favor with our people.

This Spanish War plan has now been abandoned. When the National Guard was recently mobilized for duty on the border it was called into the service of the United States for the purpose of repelling invasion. It could not under the militia clause of the Constitution be ordered to invade Mexico. Possibly under this call our citizen troops might constitutionally be sent a little way over the border to stop a contemplated invasion before it got started, but they could not be sent on any punitive or aggressive expedition. Congress, accordingly, with the purpose of overcoming that limitation, passed in the summer of 1916 a resolution authorizing President Wilson to draft into the United States Army the individuals who then composed the National Guard. There has been a good deal of discussion as to the right of Congress to authorize the President to enforce such a draft. Manifestly it is quite unfair to states which maintain National Guards larger in proportion than those of their sister states. Nevertheless, there seems to be little doubt that such a draft would be constitutional. The best authorities, I believe, hold that Congress, if it sees fit, can draft all the red-headed men of military age and leave at home all those who have black hair. However, the question of the constitutionality of the draft resolution has not arisen because President Wilson has never availed himself of the authority which Congress gave him.

But to my mind, in organizing the National Guard under the militia clause of the Constitution we are confronted

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by a far more insurmountable obstacle than the foreign service difficulty. So long as 48 different states with 48 different Adjutants General control the officering and training of the National Guard in time of peace, we shall inevitably find ourselves without even the semblance of a trained citizen army in time of war. A small body of partially trained National Guardsmen we shall unquestionably be able to muster; but the officers on the whole will not be of such good material as the men.

I am writing these words on the Mexican border, where I have been closely in touch with officers and enlisted men, both in the Regular Army and in the National Guard. I have been in close touch with soldiery before, for I served as a volunteer in the war with Spain, and subsequently I served in the National Guard. In both services, I was strongly impressed by the distinguished quality of our citizen soldiers. Yet, it is my deliberate judgment that the enlisted men of the National Guard to-day are of a quality superior even to the high standard of my former military associates. I am proud to write this statement. I confess that before my journey to the border I had not expected to find myself able to do so. However, I do not agree with these enlisted men in the view which I find that they generally hold to the effect that they are now fit to go into battle. On the contrary, I believe that they require many more months of skilled training. I am of the opinion, however, that the enlisted men of the National Guard at this moment are the best raw or semi-raw material which can possibly be wished for. If the young men who did not enlist are of the same quality as this sample which has joined the colors, Uncle Sam is certainly in luck.

I wish I could say as much for the officers. I cannot do so. Some of them are the finest men in the world. Others would never make good leaders, if you trained them till Kingdom Come.

No one can question the fact that in the Spanish War the training of our volunteer army was seriously impeded and delayed by the necessity for sifting out incompetent officers, unfit both in body and in the characteristics which command the enlisted man's respect. If we continue our present system we shall have the same experience and suffer a similar delay when our next war breaks out.

It goes without saying that Chairman Hay and the National Guard Generalissimos who besieged Congress in the winter of 1916 were confronted with all these arguments. Their reply was the enactment by Congress of the "Militia Pay Bill," or rather, to be accurate, the adoption of those sections of the National Defense Act which provide for the federal payment of the National Guards of the 48 states of the Union.

Said Congress:

"We shall require all National Guard officers to pass an examination. Then their selection may safely be left in the hands of the several states. Henceforward Uncle Sam is to pay the National Guard, and its position as paymaster will give the National Government control over the Guard's training. The National Government will prescribe the exercises, the states will control their execution, and if any organizations fail to come up to the standard, Uncle Sam will withhold their pay. Under this scheme, we shall attain a force of 440,000 National Guardsmen." So ran the glowing tale, and this pretty plan of divided control and responsibility was adopted by Congress. Forthwith, we rebaptized our militia as "The Federalized National Guard."

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Of course, *if* politics do not enter into the choice and promotion of officers, and *if* an examination is all that is required to judge of their fitness, and *if* Uncle Sam can force the backward states to efficiency in training by withholding the militia's pay, and *if* Congress will permit the War Department to maintain the standard high enough, and *if* the division of authority between state and Nation leads to no confusion and disorganization, and *if* the sequel shall prove that we can raise a force of 440,000 National Guardsmen, why then Chairman Hay and the Generalissimos have done a good job and the National Guard is really and truly federalized.

Of course, the National Guard to-day happens to be in better shape than formerly, owing to the border training which Uncle Sam has given our Guardsmen in the last few months. But the situation is exceptional. Moreover, do not overlook the fact that the backward militia states have not furnished their fair proportion of troops. Remember, too, that these backward states for the most part furnished their modest contingents very tardily and for that reason their training is of necessity curtailed.

Now, why did Congress decide that the Nation must pay state militiamen without first reorganizing them as a national force? Why did we pass the "Militia Pay Bill" without genuinely federalizing the militia? What possessed us to leave the National Guard of the State of Blank, for instance, under the incompetent control of pendulous-waisted state generals, valiant trenchermen as ever faced a camera though they be? Why did we decree that Uncle Sam must pay the piper and yet allow 48 supermilitary state functionaries to name 48 different tunes? Because we couldn't get the votes in Congress to give the country a genuine federalized National Guard under national control. Even if the War Department and the Administration had been with us—which they were not—we could not have cut that umbilical cord which attaches a choking National Guard to 48 different masters. Almost to a man, secretly or openly, National Guardsmen of exalted rank fought against national control by the War Department. Tons of highfalutin' talk beclouded the issue, which, after all, came right down to a manifestation of elementary human nature. The National Guard Generalissimos knew in the bottom of their hearts that the Regular Army officers thought them a joke. They believed that by hook or by crook they would be subordinated or relegated to the limbo where they belong. On the other hand, the regular officers protested their abounding confidence in the Generalissimos and with many bows and expressions of esteem invited them to walk into their parlor. But the wary old birds flew to their Congressmen and we sugared their cakes for them with the Militia Pay Bill.

Oh, dear reader, do I hear you say that the Generalissimos, when they fought against federal control, did not represent the real opinion of the rank and file of the National Guard? I have heard that statement many a time, but never have I been offered any testimony to prove its truth.

The fact is that the rank and file of the Guard have never been canvassed on the question. Furthermore, not only the rank and file but the junior officers of the National Guard and nine hundred and ninety-nine citizens out of a thousand could no more explain what the federalization row is all about than they could discuss the binomial theorem in Sanskrit. Other things being equal, I am entirely con-

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vinced that National Guardsmen would prefer exclusive federal control to a control divided between state and Nation. But as yet no one has been able to show us that other things would prove to be equal.

For instance, in thirty states of the Union to-day the enlisted men elect their company officers. Is it proposed that they should retain that privilege under complete federalization? Very likely not, if we are to judge by the literature on the subject. Whether the rank and file would wish for complete federalization, if it must be coupled with the loss of their power to select officers, is a question which has not been answered yet for the simple reason that it has not yet been propounded. Nevertheless, that question cannot be evaded or ignored. Personally, I am very much opposed to the promotion of National Guard officers by election. If an officer depends for promotion on the votes of his men, it is quite certain that the temptation to compromise with discipline will always be present. On the other hand, my own observation, when a member of the National Guard, has inclined me to the opinion that the enlisted men are the best judges as to which of their number ought to be promoted to commissioned rank. I think that the members of a college football team or nine or crew will choose a captain for themselves more wisely than the coaches will choose a captain for them. In the same way, I think that the members of a company of citizen soldiers will choose a second lieutenant for themselves more wisely than their colonel or their general or their Government or their Secretary of War will choose a second lieutenant for them. Beyond the first step to a second lieutenancy, however, I should not advocate the continuance of the election system in a citizen army; but I am by no means certain that the militia rank and file agree with me. Anyway, no matter what the merits or shortcomings of the election system may be, it is perfectly clear that we cannot successfully challenge the right of the Generalissimos to speak for the rank and file until our own federalization plan is so clearly outlined as to present to the citizen soldiery a basis for the discussion of its pros and cons.

Before any true federalization project can stand a ghost of a chance for adoption, its proponents must show that it offers a tolerable certainty of raising with despatch at least as large a citizen army as we may reasonably expect to raise under the present plan. In addition, our project must present a fair probability that ultimately the numerical results will far outstrip the probable numerical results of the National Defense Act of 1916. Yet no project can hold out a fair promise of early numerical success unless it is such as to permit of the presumption that the present members of the National Guard will be transferred out of state control into the contemplated federal force. Now, to any one who will look the question squarely in the face, it is plain enough that no attempt to transfer the membership of the National Guard to federal control can be successful without the coöperation of the enlisted men themselves, and probably of the junior officers as well. In September, 1915, it actually looked as if the plan for a real federalization of the National Guard was on the road to success. The best known National Guardsman in the country is Major General John F. O'Ryan, who commands the New York Division. Here is an extract from his article in the *North American Review* of September, 1915:—

"As it is conceded that the first-line troops should be federal troops in time

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of peace as well as in time of war, and as the claims of the National Guard based upon the conditions above mentioned should be recognized, it would seem to be a proper policy for Congress, in formulating new legislation, to provide for a new force not to exceed 300,000 men in time of peace, and to do this not under the militia provision of the Federal Constitution, but under the provision which gives to Congress the power to raise and support armies. If such legislation would make provision for the taking over by divisions and lesser units of all the officers and enlisted men of the National Guard of the several states, upon their application, a substantial nucleus of the proposed force would be promptly provided.

"No prospect of success has ever in the past accompanied such a proposal. Public opinion is now ready for it. The Regular Army recognizes its necessity if the National Guard is to be made dependable for use in war. The growing sentiment of the National Guard strongly favors it. The fears of self-interest would be the mainstay of National Guard objections, and these would be dissipated by the plan proposed."

What General O'Ryan said was true; but unfortunately he had not reckoned with the force of the opposition of the Generalissimos. In vain did Secretary Garrison assure them that they would not be disturbed in the enjoyment of their gold lace and their fat salaries as Adjutants General. In their inmost souls the Generalissimos knew that a cruel and unfeeling world looked on them as tin soldiers. They mistrusted the steely inspector hardened in the West Point crucible. So, as far as their curving configurations permitted, they marshaled themselves into line to fight the federalization which Mr. Garrison proposed, and they lobbied their way through.

We shall not be safe without an exceedingly large body of completely trained citizens instantly ready to take the field. How are we to get this army? What are we going to do about it? It is my fixed opinion that it is impossible to raise on a voluntary basis an adequate body of men willing and in a position to undergo the necessary training in time of peace. That is why I am forced to the conclusion that in self-defense we must prepare to cede a fraction of our liberty to insure our country's safety. Drastic as is the proposed change in our national policy, I can see but one solution of our military necessities:

As a measure of democracy, no less than as a measure of safety, I advocate compulsory training in the duties of a soldier of every young American, rich or poor, high or low, the greatest and the least, elbow to elbow and side by side.

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AN INCIDENT *on the* WESTERN FRONT

By ARNOLD WHITRIDGE

(The author of this article, Mr. Arnold Whitridge, of New York, enlisted, at the outbreak of the war, in a British volunteer machine-gun company. In September, 1914, he received a commission in the Royal Field Artillery and was sent to the front in April, 1915. He remained there continuously, chiefly in the Ypres salient and on the Somme, until the autumn of 1916, when, owing to the death of his father, he was called home and honorably discharged from the service. For his conduct in the experience here related Mr. Whitridge was mentioned in despatches and given the Military Cross.—THE EDITORS.)

ONE of the distinctive features of this war, as compared with all previous wars, is the absence of clearly defined battles. One talks of the Battle of Ypres, the Battle of Verdun, or the Battle of the Somme as if they were separate engagements, but, as a matter of fact, the antagonists still hold the field and are still pounding away at each other. There have, of course, been periods when the fighting in each of these localities has reached a pitch of fever-heat, but in no case has either of the opposing armies been destroyed or even lost contact with the other. From the layman's point of view, every battle on the western front since the Marne has been highly unsatisfactory. Enormous casualties have been suffered and inflicted, but apparently neither side has gained any definite objective.

The Battle of St. Eloi, beginning on the 26th of March, 1916, was no exception to the rule. Things had been pretty quiet for some time, and the "powers that be" decided to straighten out the line by attacking a small salient about 600 yards long and 200 yards deep. In the middle of this salient was a large earthwork called "the Mound," which was known to be a happy hunting ground for the Boche artillery observers and from which their snipers could enfilade one of our most important communication trenches.

St. Eloi itself is, or rather used to be, a small village about four miles southeast of Ypres, situated at the junction of the Messines and Warneton roads. In the earlier days of the war, the British front line had been established just in front of it, and though the Germans had often tried to hack their way through they had never set foot in any of the battered farmhouses.

The assault of the German position was timed for 3:15 in the morning. It differed from the usual infantry attack as it was not preceded by any artillery preparation. Instead of the usual bombardment, lasting often for several days, the staff relied on the simultaneous explosion of six mines, containing together about ten tons of dynamite. These mines were to be touched off at 3:14 A. M., sixty seconds were allowed for the falling débris, and at 3:15 the Royal and Northumberland Fusiliers were to go over the parapet. The explosion of the mines was the signal for the artillery to begin. Our brigade of 4.5 howitzers

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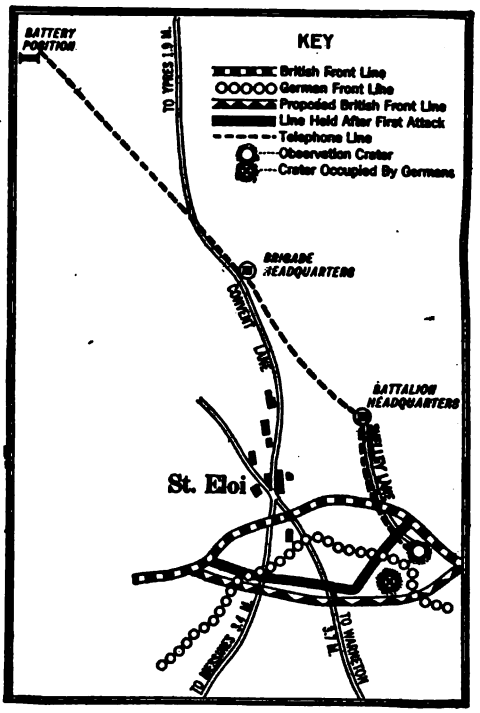
had been told off to put up a barrage of fire on the left flank of the Royal Fusiliers. The other two brigades were barraging on the right flank of the Northumberlands and along a support trench running parallel to the German front line and about a hundred and fifty yards beyond the objective. In this way it was hoped to isolate those of the enemy who had not already been killed by the explosions, and to give our men time to link up the new position with the old front-line system.

The Major and I were observing from our regular station, which was located in a ruined windmill. As a matter of fact, no observation was needed, as the guns had been carefully registered the afternoon before, and there had been no alteration since then in wind or temperature. In any case, our orders were to continue our barrage until we heard that the infantry had won the position.



THE BATTLE OF ST. ELOI

The explosion of the mines made our old ruin rock like a cradle, although we were nearly three quarters of a mile from the German trenches. It was a grand sight! The Mound we had been looking at for so many months was literally lifted into the air and then deposited by small pieces all over the country. At the same moment, some hundred and seventy-five guns of all calibres opened a concentrated fire, forming a ring around the German position. For the first hour it was too dark to see what was happening, and then we could just make out the infantry going to and from the captured trenches, escorting batches of German prisoners. At about four o'clock we got news from our liaison officer at the infantry brigade headquarters. The Northumberlands, who were attacking on the right half of the salient, had been perfectly successful. The mines had wrecked the German defenses, great gaps had been torn in the wire, and a good proportion of the garrison in the trenches had been blown skyward. Those not actually killed were cowering in their dugouts, and were either bombed or made prisoners. Unfortunately, the Royal Fusiliers on the left had not done so well. We heard a story afterward that the Boches had tunneled into one of the mines and taken out the charge. Anyway, two of the mines failed to explode, and consequently when the infantry advanced to the assault they were hung up by barbed wire and suffered horribly from the machine guns.

It was not until nine o'clock that the German artillery really settled down to it. Of course, they had opened fire as soon as the attack began, but they had immediately begun to search for our batteries, and had not

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yet paid much attention to what the infantry were doing. Suddenly they changed their tactics and started in with a methodical "crump," "crump," "crump" on St. Eloi. There was no variety about it. They were using the 17-centimetre howitzers exclusively, and their gunners, drilled to perfection, were sending over beautifully timed salvoes every thirty seconds. There were not many houses still standing in St. Eloi when they began, but by the time they had finished it was as if some great carpenter had planed the village out of existence.

In the evening the artillery on both sides slackened off. With only three guns in action, we had fired something more than 1,200 rounds and everybody was glad of a few hours' rest. The fourth gun had developed a droop in the muzzle after the first two hours of the bombardment, and was sent off to the ordnance workshops that evening. At about six o'clock we got the official news from the infantry brigade headquarters, which did not vary from what we had heard before. We held the three mine craters on the right and had captured about half the objective. On the left, as we knew already, the attack had failed and the Royal Fusiliers had been forced to come back to their trenches.

During the next forty-eight hours we established a strong line on the right of the salient, and gradually worked round until we had surrounded the fourth crater on three sides. The strip of ground facing east, making the fourth side, was the only means of communication left to the garrison. Across this stretch of 100 yards, with two communication trenches running through it, our artillery kept up an incessant barrage of fire. Our battery of howitzers averaged 800 rounds a day. In addition to our contribution there were the other two batteries of our brigade, and two batteries of Belgian 75's, so that all together we made that piece of ground fairly unhealthful.

At intervals, the King's Liverpool Regiment, which had relieved the Royal Fusiliers, would try to rush the position, but the Boches were not to be caught off their guard. Their machine guns were absolutely deadly, and the King's Liverpools invariably had to fall back before they could get to close quarters. There were only two courses open to us. In the first place, we might wait until the garrison of the crater was starved into surrender. Surrounded on three sides, and with the fourth a wall of fire, they were completely bottled up. But the process of starving a body of men into submission invariably takes longer than is expected. Presumably they had their emergency rations with them, and determined men can live a long time on biscuits and canned beef. Moreover, our incessant barrage was costing us an enormous quantity of ammunition, as well as wear and tear on the guns.

The alternative was to turn the fire of the guns on to the crater. At first sight this may seem rather obvious, but the proximity of our own men made it a ticklish undertaking. It was doubly difficult in this particular case, as the explosion of the mines had so altered the contours of the ground that the crater was not visible from any of our observing stations. The only thing to do was to find some place from which the crater could be seen, and then lay out a telephone wire between that spot and the battery. It fell to my lot to be chosen for this particular duty, as I had laid out the original system of communications between our battery and the infantry.

My objective was a disused crater

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in No Man's Land, just beyond the end of a sap where there used to be a bombing post, and only fifty yards from the point of attack. The infantry had always occupied it by night with one platoon and a Lewis gun, but as far as I knew it was untenanted in day time. At seven in the morning, I started off with two telephone orderlies, hoping to have established communications and be ready to open fire by about ten o'clock. We followed the telephone line up to the beginning of a communication trench called Convent Lane, without finding any breaks, but there the trouble began. Convent Lane had received especial attention from the German artillery, and from there on the wire simply ceased to exist. It was evidently a hopeless task to try to piece it together, or even to lay out a new strip, as we were short of cable. The only course was to push on to the battalion headquarters and trust to luck that the Colonel would let me use the buried cable to his brigade headquarters. I knew our liaison officer was still at brigade headquarters, and that he would transmit orders to the battery. The objection to using the buried cable of the infantry was that at any minute they might want the line for themselves, and that we might be cut off just in the middle of the ranging. However, it had the advantage of being practically unbreakable. The cable was three quarters of an inch in diameter, and was laid about three feet under ground, so nothing but a direct hit from a high explosive could possibly affect it.

Beyond the battalion headquarters there were still 250 yards to go before we reached the observation crater. Leaving one of the orderlies behind, I went forward with the other—an excellent fellow I had often worked with before, named Bombardier Clarke. He carried about half a mile of wire, while I carried the telephone and my periscope. Our route took us down an old communication trench known as Shelley Lane. The parapet had been knocked to pieces, so we had to crawl along the bottom of the trench on our hands and knees. The telephone case which was slung over my shoulder took a fiendish delight in dangling around my stomach, while the unfortunate Clarke appeared to be getting more and more hopelessly involved in the wire with every other step. However, Shelley Lane is only 150 yards long, and eventually we found ourselves in the front-line trench. It was not a particularly choice spot, but at least it had a fairly decent parapet and to us it seemed like an oasis in the desert.

The last lap of the journey led us along the sap running out from the front-line trench, past the bombing post and into the longed-for crater. It was not nearly as muddy going in the sap as along Shelley Lane, but in other ways infinitely more horrible. A German sniper had evidently marked it down and we tried to hurry along without noticing what a few empty sand bags only partially concealed. But at last we reached our goal, and I was surprised to find it occupied by a lieutenant, two non-commissioned officers, and about twenty men. They looked at me with wild-eyed astonishment—where had we come from, and why had we come? They had been there for three whole days and had seen nobody but their own ration parties, who came up at night. If we had appeared in immaculate dress suits and tall hats, we could not have excited more wonder.

I have never felt more sorry for anybody than for that dirty, unshaven, hollow-eyed platoon. Every day their number was diminishing, and the un-

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couth lumps that were wrapped up in blankets were silent witnesses to their sufferings.

And yet, these men were cheerfully resigned to their lot—one of them even told me that he was going to write to the *Times* about the state of the drains! They were not, however, overjoyed when they saw that I had come up to observe some shooting. To the average infantryman, the forward observing officer of the artillery is nothing more than a mischief-maker—one who deliberately asks for trouble and then gracefully retires, leaving the infantry to receive the answer to his ill-timed hostility. In the early days of the war, this harsh judgment was not without a certain element of truth. But since then the tables have turned, and, thanks to the unlimited supply of ammunition, the "gunner" officer has become more popular in the front-line trenches.

For a moment the lieutenant was in doubt as to whether he should withdraw his platoon. The German crater was only fifty yards away, and fifty yards is not much of an error for guns that have already exceeded their supposed "life" by several thousand rounds. However, as there was no place to which he could withdraw, he wisely decided to stay where he was.

Meanwhile, Bombardier Clarke had been getting into communication with the battery. I held my breath as he opened the instrument, took up the microphone, and called up the familiar "Hello, Battery." For once in a while the gods were on our side, and everything went right. The other telephonist transmitted from the battalion headquarters to the brigade liaison officer, and so back to the guns.

"We're through to the battery, sir."

Thank God for that! I settled down on the slope of the crater and raised the periscope cautiously over the edge.

"Fire Number One gun."

The Major and I had worked out the angle and the range before I started, and as I heard the shell coming over, I began to wonder if we had made any miscalculations. Then we saw the black smoke and the lumps of earth in the air, and heard the shell explode.

"Just over and a shade too far to the right."

We were observing from a flank which made it harder to correct for line, though more accurate for range.

"Drop 25 yards."

That was better. Just about perfect for range, but still too far to the right.

"Ten minutes more left."

"Bumped the lip of the crater," exclaimed the platoon commander.

"Now, let's have one right in the middle." I groaned inwardly, as every correction now meant bringing the shell still nearer to us. The guns had been shooting splendidly so far, but there was always a chance of an erratic round. Under the most ideal conditions, every gun has a certain error. Theoretically, every shell fired under the same conditions and at the same elevation should land in the same spot. But, practically, a gun that has fired more than ten thousand rounds has no respect for its range tables. However, this was one of the occasions where an artillery officer has to keep his fears to himself and take a chance.

"Five minutes more left, and lay very carefully."

The shell landed right plumb in the middle of the crater.

"That is the way I dream of them," Clarke confided to me, and on the strength of this endorsement I made no further corrections.

For the rest of that day, we stayed

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in the crater and wended our way home in the evening. We might have gone back to the battery sooner, if we had not heard that the Germans were busy "strafing" our gun position. It was just the afternoon "hate," but more intensified than usual, as they were beginning to get us pretty accurately located. Luckily, they developed a perfect talent for just missing us. When we got home we found shell holes between, behind, and in front of the guns, but there had been no direct hits on the emplacements and we had had no casualties.

Early the next morning, the infantry assaulted the crater and took it with very small losses. Thirty-six Germans were captured, including two officers, and they had all had about enough of it. During their four days' occupancy only two men had got through the barrage, and they had been unable to bring anything with them. Our fire had been effective in destroying their morale, but had not caused very heavy losses, as most of the garrison had dug shelters for themselves into the sides of the crater.

The prisoners had a good stock of provisions left, but they had suffered terribly for want of water. In fact, without the water bottles of the dead men, they must have surrendered sooner. On the way back to the concentration camps, they passed near the battery, and our gunners watched them with keen interest. Our general had told us that as soon as their crater was captured the division would go into rest, which partially explains the wild enthusiasm with which the prisoners were greeted.

What happened after the relief of our division belongs, as Kipling would say, to another story. As a matter of fact, the ground so hardly won by us was recaptured by the Germans about a week later. The reader may be inclined to wonder, as did little Peterkin about the battle of Blenheim—"What good came of it at last?" A good deal of good came of it. In the first place, by the destruction of the Mound the Germans lost a most valuable point of vantage, and our traffic in the communication trenches became correspondingly safer. But even more valuable were the lessons of experience. It was shown that attacks on such a small front were not worth the enormous amount of ammunition involved, for in this trench warfare the artillery is such a tremendous factor that either side can render untenable for the other such a small piece of ground as we attacked at St. Eloi. But though the reoccupation of Belgium and Northern France is the ultimate end of the Allied armies on the western front, this is not the object of every engagement recorded in the papers. For the first year the Allies aspired only to hold on to what they had. Then came the period of small attacks, such as this affair at St. Eloi, when they wanted to feel their strength and test it against the enemy. The last phase began with the battle of the Somme on July 1st, and is still developing. People in America are continually asking whether the Allies can break through the German line on the west. They can, and they will, provided the Germans do not accept their peace conditions first.

For more than a year we on the western front waited to see what the Germans would do next, and then tried to prevent them from doing it. But, thank Heaven, the tables are turned at last, the Allies now hold the initiative, and are making the Germans conform to their will. It is a long business, but every day the French and English are learning new lessons. The Battle of the Somme

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shows that the problem of capturing positions at a minimum cost of life is being solved more and more successfully with every attack.

The Allies have the resources of the world behind them, and in spite of the submarine hysteria the constant flow of these resources is hardly affected. It may take six months, it may take six years, but in the end there will be peace, and it will not be a Peace without Victory.

SOCIALISM *and* UNIVERSAL MILITARY TRAINING

By HENRY DWIGHT SEDGWICK

WHEN the bill for the appropriation of $1,000,000 to equip and maintain the National Guard was introduced into the Assembly of New York State on February 7th last, it was opposed by the two Socialist members of that body. This action seems to have made some people suppose that Socialism forbids all military preparations, including universal military training. As similar action will probably be taken by other Socialist members of legislative or municipal councils, in case measures such as were introduced into the New York Assembly come before them, it may be worth while to consider briefly whether Socialism is by its nature necessarily antagonistic to what this magazine means by National Service and in particular to universal military training. It may be pointed out at once that the action of the two New York assemblymen was not against universal training, but against a measure making provision for the National Guard and other volunteer organizations. These two Socialists were undoubtedly acting on Socialistic principles in opposing that bill; but such opposition need not carry any implication that they would oppose a plan for universal training.

In order to consider the question one must keep in mind the central principle of Socialism, which, as defined by Morris Hillquit, is this: "Socialism advocates the transfer of ownership in the social tools of production—the land, factories, machinery, railroads, mines, etc.—from the individual capitalist to the people, to be operated for the benefit of all."

As this is the fundamental doctrine of Socialism, the attitude of Socialism toward war and all preparation for war, including universal training, must depend, in the main, upon the effect war and preparation for war would have on this fundamental doctrine. Take war, first. It is hardly wise and prudent for any large body of people to assert an unshakable opposition to war under all circumstances; because war wears two very different aspects. War may be aggressive or it may be defensive; it may be a robber's war or a policeman's war. It is plain that a war of aggression waged by a capitalistic state against a Socialist state and a war of defense waged by a Socialist state to maintain its independence would be regarded by Socialists as two very different matters. And, of course, defense by force against aggression has always been

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accepted by Socialist leaders. During the Franco-Prussian War of 1870 the Social Democratic Party of Germany issued a manifesto saying: "So long as the mercenaries of Napoleon threatened Germany it was our duty as Germans to defend the independence of the Fatherland. Such a defensive war does not exclude offensive measures. It includes, as does every war, the necessity of forcing the enemy to accept peace." In 1891, Wilhelm Liebknecht (the father of Karl Liebknecht) declared: "We will accept no formulation which delivers the more Socialistic country to the less Socialistic." The French Socialist, Sembat, agreed and added: "There is not a single workingman who would undertake to disarm his country for the advantage of the invader."

Peace-at-any-price adherents may become Socialists, but it does not follow that the tenets of Peace-at-any-price become Socialistic tenets. Deeds speak louder than words; when Socialists are in danger of being attacked, they arm; when they are attacked, they fight. When this war began the German Social Democrats, as a body, voted for the war credits. After the war had been raging for five months the French Socialist Party issued a proclamation: "To-day, as on August 4th, [1914] . . . we have the certainty that we are defending our country, which was brutally attacked . . . To-day, as on August 4th, we are certain of winning over to our cause the Socialists of all countries, the entire International. . . ." The manifesto of the Socialist Party in Belgium, issued on August 3, 1914, said: "We do so [try to prevent the invasion] with all the more ardent hearts in that in defending the neutrality and even the existence of our country against militarist barbarism we shall be conscious of serving the cause of democracy and of political liberty in Europe." And, no Socialist party (I believe) in the neutral countries of Europe has refused to support measures taken by their respective governments for the armed defense of their neutrality. In other words, Socialism will defend itself by force, if that be necessary.

The Socialistic attitude of self-defense even by force is plainly seen in the almost universal sympathy of Socialists with workers in their armed struggles with capitalism. Let me refer, for instance, to the riots at Homestead, years ago, and cite a paragraph concerning the riots there, from a book written by a man in sympathy with the workmen:

> I read [in the newspaper] the vivid account of the tremendous struggle, the Homestead strike, or more correctly, the lockout. The report details the conspiracy on the part of the Carnegie Company to crush the Amalgamated Association of Iron and Steel Workers; the selection for that purpose of Mr. ——, whose attitude toward labor is implacably hostile; his secret military preparations while designedly prolonging the peace negotiations with the Amalgamated; the fortification of the Homestead steel-works; the erection of a high board fence, capped by barbed wire and provided with loopholes for sharpshooters; the hiring of an army of Pinkerton thugs; the attempt to smuggle them, in the dead of night, into Homestead; and finally the terrible carnage.

Socialists regarded this petty war as part of the class struggle and gave their complete sympathy to the workers.

It is true that at the opening of the present European War the Socialist Party of the United States declared that it, "in conformity with the declarations of the international Socialist movement, hereby reiterates its opposition to this and all other wars,

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waged upon any pretext whatsoever." But a resolution adopted when war is three thousand miles away may lose some of its rigidity when war comes over the border; and it cannot yet be dogmatically stated that, if the Socialist Party believes the country attacked, it would refuse to support defensive measures. On the contrary it is reasonable to assume that the Socialist Party would not oppose the defense of the Texan border, for instance.

This supposition is a fair inference from the grounds upon which Socialism opposes war. Theirs is not the opposition of the Quaker; they believe that wars are the necessary result of the capitalistic system, that capitalism engenders imperialism, and imperialism begets war, as truly as any necessary sequence of cause and effect in the physical world. According to Socialists, war is part of the struggle of capitalism against its competitors, it is waged for the benefit of the master class, it is intended to strengthen the domination of capitalism over the laboring class, and war's burdens and sufferings fall on the laboring class. It is plain that if a war were for the benefit of the laboring class, it would assume a less ugly appearance in their eyes.

The adverse attitude of Socialists toward preparations for war is mainly determined by their belief that they are preparations in the interest of capitalism. But such preparations as are reasonably likely to turn out for the benefit of Socialism they are ready to support. Take the plan of a citizen army, for instance, and you will find some such statements as these in any text book: American Socialists "are by no means advocates of non-resistance; and in so far as the issue has been definitely met, they appear to expect the substitution of popular militia for the standing army."[1] "Socialism stands for the abolition of all wars and all armies, but it recognizes that within the modern social system this is an unattainable ideal. The practical Socialist program, therefore, advocates what the Socialists consider the next best step—introduction of a national democratic militia system instead of that of the standing army."[2]

This is undoubtedly orthodox. Edouard Vaillant said: "The armament of the people is the necessary complement of universal suffrage and a prerequisite to the development of a true democracy." Jaurès advocated a universal compulsory militia system; and a member of the German Socialist Party at the congress of 1913, in presenting the official report, said: "We do not oppose a people's army. In fact we demand it in our party platform, we call for the militia to take the place of the present standing army, we agitate for the best possible physical and mental training from earliest childhood, thus assuring to our people the most efficient means of self-defense." It is true that European Socialists have insisted on a citizen militia, instead of no soldiery at all, because of the possible danger of invasion at any time; but it is this same possibility that makes military training a practical matter on this side of the Atlantic.

If Socialists admit the need of a citizen militia, the difference of opinion between them and the advocates of military training seems to be merely whether there is sufficient likelihood of our being attacked to make it worth while to prepare to defend ourselves. There can hardly be any difference over the question whether only a few shall train or all shall train. The

[1] "American Socialism of the Present day." p. 155—J. W. Hughan

[2] "Socialism in Theory and Practice." p. 300—Hillquit.

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Socialist ideal of a people's army must rest upon universal service. This follows from the fundamental moral teaching of Socialism enunciated most clearly by Karl Marx at the founding of the International Congress. The declaration of principles, which Marx drew up, was adopted by an international committee, consisting of Englishmen, Germans, Frenchmen, Italians, Poles, and Switzers, and contained the following clause:

> The First International Labor Congress declares that the International Workingmen's Association, and all societies and individuals belonging to it, recognize truth, right, and morality as the basis of their conduct toward one another and their fellow men, without respect to color, creed, or nationality. This Congress regards it as the duty of man to demand the rights of a man and citizen, not only for himself, but for every one who does his duty. No rights without duties; no duties without rights.

The implication in these two principles, a citizen militia, and no rights without duties, must be that we should have universal military training. The only escape from this implication lies in an extreme position—either that there shall be no citizen militia until there is immediate danger of invasion, in which case Socialists must uphold the contention that it is wise to refrain from training till that time; or that there shall be no forcible defense of the country until a Socialist state shall be established here. Each alternative pushes the Socialist position to a point much farther than European Socialists have gone.

Where Socialists oppose universal military training, if they do, their action may be explained as a matter rather of tactics than of principle. Various Socialist leaders have expressed opinions adverse to preparedness, but they had in mind, as I understand, preparedness in general and not this specific question, now before the country: whether military training shall be confined to the regular army and to volunteers, which means training members of the master class and their immediate dependents, or whether it shall include every able-bodied man, which is in accord with the usual notions of equality and democracy. As Hillquit said (before any question of tactics in this conjuncture arose): "The principal virtue of a true democratic militia is that it leaves the military power in the hands of the people and prevents the ruling classes from turning it into a tool of oppression and despotism. The only people that is really free is an armed people, and the people as such can be properly armed only under a general militia system." [1]

[1] "Socialism in Theory and Practice," p. 301.

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SOME REFLECTIONS UPON OUR MILITARY EXPERIMENT *of* 1916

By HENRY L. STIMSON

(*Former Secretary of War*)

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WHEN the National Security League was meeting in Washington a year ago this country was on the brink of an experiment in military policy. There was being formulated in the National Congress legislation which was to attempt to create out of the militia of the several states a national citizen army. Warnings were being uttered against such an experiment. The then Secretary of War, Mr. Garrison, supported by many students of military policy, was pointing out the impossibility of raising and disciplining an army, the command of which was divided between the central and the local governments. Their warnings were unheeded. The local forces were too strong. Their power was enhanced by the fact that behind the Militia Plan lay a proposition for Militia Pay. Furthermore, the voices heard at Washington were mainly those of the higher officers of the National Guard, whose natural prepossessions regarding the organizations which they themselves commanded made it difficult, if not impossible, for them to exercise impartial judgment. The enlisted men and junior officers had no such voice and it is very doubtful whether the militia proposition represented fairly even the views of the rank and file of the militia itself. For example, I quote from the *Gazette* issued by the men of the 7th Regiment of New York:

We of the Seventh felt that the Militia Pay Bill and the federalization scheme were grave mistakes. The rank and file of the National Guard throughout the country had no voice in the matter. A few state officers of high rank, influential at Washington, turned the trick and, before the bill became a law, the Guard became victims of its provisions as a result of the unexpected mobilization.

The plan went through. Congress yielded to the representations which were supposed to come from the militia but which in fact were not authorized by the great body of them; the President yielded his previously expressed views to Congress; and Mr. Garrison felt constrained to retire from office. Congress adopted as the cornerstone of our national defense a system which violated every canon of military efficiency and which was shown by our own military history to be a foredoomed failure.

Under normal circumstances, such a governmental mistake might have gone unrecognized by the people of the country until in some great war crisis it brought disaster upon the Nation. The National Defense Act has within it the seeds of a political machine. It places the militiaman upon the regular pay-roll of the Federal Treasury. He receives pay not connected with outdoor service or with the performance of specific military duty. Ultimately the Act proposes to place in

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the district of each Congressman 800 such recipients of federal pay. In normal times, it is highly unlikely that the military defects of such a system would be severely scrutinized by Congress.

During some of the events of the past three years, I had begun to question whether Providence still exercised its traditional care over children, drunkards, and the United States. The timely coming of the militia mobilization last summer, however, fifteen days after the National Defense Act became a law, would indicate that in some respects, at least, these doubts were unjustified.

This mobilization has forced down our throats dramatic proof of the shortcomings of our new system. More important than that, it has brought home to the militia the unfairness and injustice of the system to them. The figures showing the results of this mobilization, not only as a military performance, but also in respect to the economic effects upon the Guardsmen and their families, are now becoming available. Such figures have been compiled by the War Department and laid before the committees of Congress by the Chief of Staff. Further figures have been compiled by private authorities, notably the committee appointed by the Mayor of the City of New York. They are worthy of the careful study of every citizen.

In order to get the background against which to view these figures, it is necessary to remember that the first proposition of our land defense is to provide a force of at least 500,000 men ready to meet an invasion. Recent estimates of the General Staff have placed the size of the required force at even higher figures than 500,000, but for our present purpose we will take the minimum discussed at the time when this legislation was under consideration. This force must be composed mainly of trained citizens. The Regular Army cannot be made its basis. The main function of the Regular Army is a different one, namely, to furnish the garrisons of our national outposts and insular possessions, as well as the higher offices for our citizen soldiery. There are less than 50,000 mobile regulars within the United States to-day and we are finding it extremely difficult to recruit this force into larger proportions with even the assistance of a much higher rate of pay than is received by almost any other army.

Furthermore, studies of the General Staff, based upon the strength of the armies and the merchant marines of other nations, have shown that it would take but little more than two weeks for any one of at least three nations to land upon our Atlantic seaboard an expeditionary force of more than 150,000 men (in one case more than double that number) with their accompanying animals and equipment. The same studies show that a force of nearly 100,000 men could be similarly landed by at least one nation of the Orient in barely three weeks upon our Western seaboard. Two of these four nations are to-day certainly and the other two possibly superior to the United States in naval power and might be able to control the sea within a brief interval after the outbreak of war. The problem, therefore, of meeting an invading force is a real and not an academic problem. What have we got under our new system with which to meet such an invasion as shown by the practical test which we went through last summer?

In the first place it is erroneous to say that this test was not a fair test, because the system had only just gone into effect, and that had the law been in existence longer the results would

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have been different. The militia system is not a new system. For more than fifteen years, the National Guard have been receiving from the Federal Government constantly increasing appropriations for arms, ammunition, uniforms, travel, and manœuvre pay, for target practice and for various other purposes. Experienced officers of the Regular Army, as advisers and inspectors, have been doing all that man can do to raise the standards of discipline and efficiency in a force over which they have no direct control. The new law added substantially little in the way of improvement to what had been in effect for these fifteen years. It did add the inducement of federal pay, but in the case of the enlisted private this pay amounts to roughly one dollar per week or fifty dollars per year, and however effective that might be to stimulate the interest of politicians in the system in time of peace, it is unlikely that such an amount of money would produce many more fighting volunteers in time of war. I think, therefore, it is not unfair to say that the results of the mobilization would have been substantially the same whether it occurred in 1916 or five years later.

The President's call issued on June 18th was for units at war strength. Take the situation on August 31st, when numbers were at their maximum and there had been nearly two and one half months in which to recruit. The war strength of the units called for should have been 252,000 men. As a matter of fact, we were able to raise only 138,500 men. We were 113,500 men short. This was in spite of the most zealous efforts at recruiting; it was on top of a year of unparalleled interest in military affairs, when hundreds of thousands of citizens all over the United States were marching in parades and shouting themselves hoarse for Preparedness.

Nor were these men whom we did raise trained Guardsmen. More than 60 per cent. of them were wholly raw recruits who had come in since the call. Nearly 50 per cent. of the enlisted Guardsmen, whose names were originally on the rolls of the militia units included in the call, disappeared altogether after the call came. More than 23,000 of these were found physically unfit. More than 7,000 wholly failed to answer the call; and more than 16,000 (nearly enough to constitute an infantry division) disappeared between the time of the call and the muster in, nobody knows where.

In the case of two states, Georgia and Kentucky, such loose methods of medical examination had been employed by the state authorities that upon the call last summer more than half of their Guardsmen were rejected by the federal examiners as physically unfit for service. In the case of one company of the First Kentucky Infantry, these rejections amounted to 77 per cent.

Again, how did the men finally obtained measure up in the great essentials of discipline and marksmanship? The results of the field inspection of about 123,000 of the force thus mobilized give startling figures. More than 56,000 had never had range instruction with the military rifle before the call; only 19,000 had achieved a standard of marksmanship which the Chief of Staff of the United States Army calls "barely tolerable"; 71,000 of these men had never attended a previous encampment or had any period of field training whatever; only 37 per cent. were men who had received before the call more than three months of our imperfect indoor militia training.

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In other words, when the test of service came to this force of the militia of the several states which Congress has planned to make our first line of citizen defense, practically half of it melted away into nothing at the call. When, after three months' strenuous effort at recruiting, we had gathered in all the men we could lay our hands on, we had a force which was 113,000, or 45 per cent., short of the number called for and only 21 per cent. of whom could shoot "barely tolerably," and 63 per cent. of whom were virtually untrained.

China could hardly have done worse than this. This difference between what the law contemplated and what the actual facts presented could have hardly been exceeded in the most corrupt bureaucracy. As a matter of fact it is not the result of corruption any more than it is the result of accident.

These facts are not given now for the purpose of causing humiliation to a force of men for whom individually we ought to have the greatest respect and to whom, for their efforts last summer, we owe a debt of national gratitude. They are the result of false theory and a wrong system. They come, in the first place, from the system of divided military control. They come, in the second place, from the false theory that this Nation can take a body of state militia that has enlisted for one purpose and, by act of Congress, transform it into a body of national soldiery intended for an entirely different purpose. Finally, they come from the most false theory of all —the theory that is the vice of the volunteer system—namely, that you can successfully ask a small number of men, without regard to age, business, or any other obligation except that of patriotism, to bear the burden which should rest equally upon the shoulders of us all.

Our failure last summer is not the fault of these militiamen who for years and under great discouragement have been doing their best in this Nation to keep alive the flame of patriotic duty and military efficiency. The fault rests upon the Nation which throughout that time has been entirely indifferent to that duty, and which now, when the call for defense can no longer be resisted, instead of facing manfully a great emergency, has attempted to shuffle off on to the backs of this small body of patriotic men the load which should be borne by all.

The attempt is as shortsighted and futile as it is selfish. The figures of this summer's mobilization make it only too clear what the result will inevitably be. In a free country, no fraction of the population will long continue to bear the burden or the expense properly chargeable against the whole. The records compiled by the Mayor's committee of New York give an eloquent picture of the hardship imposed by last summer's duty upon the members of the National Guard, and they also picture the inevitable result. Eighty-four per cent. of the Guardsmen, of whom inquiry was made and answered, stated flatly that, after their present terms expire, they would not reënlist in the Guard. The same assertion is made by the 7th Regiment *Gazette*, as follows:

> There is no question but that if the present legislation stands as it is to-day, it will only take four years before the National Guard will be so reduced in numbers that it will be disbanded. This is a broad and sweeping statement but the only conclusion that can be drawn from the facts. Almost without exception every man in the Guard to-day when his period of enlistment is up is through for all time. This is true in all classes of organizations and in all states. . . . At the present time, when the Guard is mustered out (of the federal service) its members will not only not ask

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their friends to join, to meet the ever present necessity of recruiting, but they will persuade them not to, and practically none will reënlist themselves.

We thus reach the next question of what we are going to do about it. It is a pressing question. Too much time has been lost already. At the outbreak of the great European War, other neutral nations lost not a day in putting their military establishments in order. We delayed for nearly two years and then adopted a system which has immediately broken down. The Mexican mobilization has cost us to date between 190 and 200 millions of dollars, but that expense can be made in part productive if we immediately avail ourselves of the lesson which it has taught us in order to build up a proper system of defense. If, on the other hand, we do nothing, it will be worse than wasted. Furthermore, the country is now alive to the necessity of preparedness. This is shown by the cheerfulness with which the unprecedented size of the appropriations for military and naval defense, made at the last session of Congress, have been accepted by the country, as well as by the active discussion which this subject has received throughout the land. In a democracy, intelligent and constructive military legislation can probably only be accomplished at such a time. If the period be allowed to pass by unavailed of, the condition is likely to go on unremedied until the next war crisis, possibly not far distant, finds us wholly unprepared. Under these circumstances, the duty is imposed upon the Administration and the Congress which was elected in November to do, without delay, what evidently can be done now but which later may not be possible of accomplishment.

In discussing briefly the course which our policy should follow, it would seem that certain errors of the past have been so clearly revealed by our recent experience that they will hardly be repeated. We shall hardly again make the mistake of trying to create an army under divided authority. Nor are we likely again to think that we can seize upon a body of men who have enlisted for the primary purpose of local home defense, many of them of mature age and with family and business ties, and convert it into an expeditionary force ready to go at a moment's notice to any portion of our broad land. I think that no candid mind can now resist the proof that has been furnished that our new army must be organized, trained, and commanded by the central Government and that its soldiers must be composed of men who, owing to their youth, will not only be most fitted for a soldier's life, but also most economically spared from the productive work of the Nation.

There remains, however, the fundamental question of how such a force is to be constituted. This question is complicated by many difficulties—difficulties arising not only out of our national history and prejudices but from the suddenness with which, in modern times, the entire mode of warfare has been transformed. In general, there are three possible alternatives, each of which has advocates of merit and respectability:

1st. By voluntary training.
2d. By selective training.
3d. By universal training.

I am very glad that the National Security League has so clearly and so many times registered its belief that the last of these methods should be adopted. I believe that this decision rests upon sound and unanswerable reasons—reasons so rooted in the fundamental principles of this Republic

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that in the end such a course will be found not only right but most expedient.

The volunteer system has become obsolete, not only because modern war has grown to such gigantic dimensions that the necessary force will not be obtained by volunteering, but even more clearly because with the growth of modern democracy the unfairness and injustice of such a system has become increasingly apparent. The connection between this development of fact and of principle has been direct and inevitable. The old-time army was a small affair—a group of professional champions. The modern army is the armed nation. The growth in the relative size which the army bears to the State has been simultaneous with the growth of interest which the entire people take in the affairs of government, including the army—that is to say, simultaneous with the growth of democracy. Thus the growth of the modern large army does not mean retrogression into militarism. That is why during the past century the adoption of universal training and service has occurred in free republics like Switzerland, France, Argentina, and Chile, and in commonwealths like Australia and free constitutional monarchies like Norway and Sweden. The work of the army has become so intimately identified with the work of the people of the nation that the citizen feels aggrieved to be asked to do it if his fellow citizen remains idle.

The logic of facts is equally cogent with the logic of reason. Conservative Britain, which clung to the volunteer system until face to face with a mortal emergency, has now abandoned it. If it failed her, in a country where, proportionately, five young Englishmen in time of peace enlisted in her Territorial Forces as against one young American in our National Guard, what could we hope for from it here? In Canada, also, where, in time of peace, six young Canadians enlisted, proportionately, in her National Guard to one young American in ours, and where under pressure of war Canadian patriotism has produced unparalleled results in volunteering, nevertheless the paramount question to-day is whether they shall not introduce the system of compulsion to remedy the injustice made evident by the abstention of certain races and certain provinces.

In other words, this steady trend on the part of the nations of the earth toward popular government on the one hand and universal military training and service on the other represents but the steady growth of an ideal in justice and fair play, namely, that he who has a voice in the selection of his own government is bound in honor to defend that government. It means further that in spite of past prejudices the peoples of the earth to-day recognize that there is a great difference between compulsion to serve a sovereign and compulsion to serve a commonwealth; that in the latter case compulsory service means merely the deliberate voluntary choice of the people themselves.

When we come to the further question of the choice between selective training, on the one hand, and universal training on the other, I believe that considerations both of national and of military policy point overwhelmingly to the latter method. The method of selective training—training only a small portion of the young men of the country, chosen by lot—leaves out of consideration, first, the well known historical fact that it is impossible to forecast now the extent of future exigencies in unknown wars. In the second place, it fails to utilize the influence in prevention of war which

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comes from the fact that a nation has made itself ready to exercise its entire power. Finally it leaves out of consideration all benefit to the citizenship at large. I have come to believe that, however important military training may be from the standpoint of national military defense, it is even more important from that of the moral and economic benefit which would be derived by the youth of this Nation. In my opinion, the young man of America needs the benefit of military training even more than the army of his country needs him.

In support of such a belief, we fortunately now have the benefit of an experiment conducted within our own land during the past three years, the experiment of the military training camp at Plattsburg. We do not have to depend upon the experience of other nations, cogent and persuasive as that experience has been. I have yet to meet a man who has been through the course at Plattsburg, or the father or mother of such a man, who has not become a convert to the benefits of field military training intelligently applied to the American youth. During the past hundred years, the people of this country have been rapidly changing to an indoor race. From a nation of vigorous and hardy frontiersmen, more than 90 per cent. of whom lived on the farm or in the forest, we have become rapidly transformed into a nation with no longer a western frontier and more than a majority of whom live in constantly enlarging cities. The preponderance of modern city life with its softening influence upon the fibre of body and resolution alike is a new phenomena upon this planet of ours, and one the effect of which upon our race is yet to be appreciated. We only know that this influence is thrown tremendously against those hardy outdoor virtues of mind and body in the atmosphere of which the foundations of this Republic were laid.

We also know that there has been pouring into this country and these cities a vast stream of immigration composed of men who never had the training in loyalty to American institutions which was instilled into our fathers by the wars, the privations, and the common experiences of our national growth. We know that many of these immigrants have come here not to assume but to escape national duty. We know that many of them have come with a very imperfect appreciation of the necessity of taking up any duty to the State, let alone that dutyof sleepless vigilance required for the preservation of liberty. During the past two years, we have had ugly revelations of the imperfect way in which these men were being assimilated into our self-governing commonwealth under our existing institutions.

Can one think of these considerations and not be clear as to our duty? Can one think of the soft, undisciplined American city boy, or the torrent of humanity that has poured in upon us from Southern Europe, and wish to have any portion of our young manhood exempted from any influence which will tend toward hardihood and discipline, toward loyalty and patriotism? Can we watch the steady ranks at Plattsburg standing at attention in the evening light as the call to the colors sounds and not wish to have our whole citizenship feel the thrill that then ran through us?

I have no patience with those critics who say that universal military training is at variance with the ideals of progress in our democracy. It is at variance only with the false notions of democracy held by men whose grasp on reality is feeble. With the only possible democracy, democracy in this

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plain old world of ours, with all its limitations of human nature, language, race, and sex, universal military training is not alone consistent but it is the only basis upon which such a democracy can safely rest. It is one of the surest levellers of undemocratic distinction. It is one of the surest means by which the modern boy can be brought face to face with both the hard and the noble facts of real life. It is the only way in which some boys can experience the elemental facts of hunger, cold, exhaustion, or may learn of the vital stores of nerve, grit, and courage by which such evils can be met.

It is one of the surest ways to learn the nobility which underlies our common American nature. It is the simplest method in which they may learn at its foundation, and in a manner never to be forgotten, the duty of the individual to the State and the flag which symbolizes that State.

In conclusion, I wish to point out briefly what I deem to be the practical deductions following from these considerations. The men who object to universal training not only misconceive the great democratic function of such training, but many of their so-called practical objections are rooted in a misunderstanding of the necessary scope of the proposition.

If I am right in the deductions which I have traced from our experiences hitherto, the essential purpose of this training is to get the American youth out of doors and to train him intensively in the field. To house him in barracks or schools would be destructive alike of the military effectiveness of the training and the great economic benefit to American health. Furthermore the meaning of intensive training is that it should be applied in a single unbroken period, during which the pupil's attention is concentrated upon his military work, with no intervals for distraction or forgetfulness. The great lesson which Plattsburg has taught the Regular Army is the superiority that such intensive training has over all other kinds and its immense possibilities in shortening what had previously been considered the minimum time required to make a soldier.

The logical conclusion from these premises would be that the bulk, if not all, of each man's training would be applied in a single period of about six months spent in the field, in the open season of the year, under the instruction, so far as possible, of the class of instructors which have made the work of the military instruction camps such a success—the officers of the Regular Army.

It has been the view of the progressive officers of our Army, embodied in the report of the General Staff on the Organization of the Land Forces of the United States in 1912, that, assuming competent instructors and a proper staff organization, such a period would be sufficient to form a respectable army. The experience at Plattsburg, so far as it has gone, has served powerfully to confirm the views then enunciated by the General Staff. The recruit in six months would receive more than 1,200 hours of training as against the 192 hours per year which is required of the militia by our new National Defense Act, or more than six times as much training as is received each year by the present cornerstone of our citizen defense.

Again, those who raise the question of expense have never considered the enormous saving to be derived from transferring the military policy of this country from a basis of pay to a basis of duty and patriotism. The item of pay for the Regular Army has hitherto constituted fifty millions of our one hundred million Army budget. Under the militia system of our present law,

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we pay the National Guardsman at the same rate as the Regular for field service, besides the pay which we give him for armory drills. Under the system of universal training, as carried on in other democracies, this item is practically wiped out. Nor would there be any of the expensive army posts which now serve to increase the cost of our military establishment. Careful calculations made by the officers of the Regular Army indicate that we could train for six months the estimated 500,000 youth of this Nation who reach the age of training each year, and are physically fit, for less than half the money we have spent during the past six months in the barren job of mobilizing 138,000 Guardsmen upon the Mexican border.* If we had done that last year, what a difference would we have achieved in the defensive position of our country and in the efficiency of our youth!

All in all, it seems clear where runs our course of national duty. The paths of principle and expediency merge together in the same direction. Let us make no more false starts or be satisfied with further half-way measures.

America is worth defending properly, and American manhood should be trusted to respond to the same motives of efficient patriotism upon which other republics rely.

The GREAT WAR

A REVIEW OF THE MILITARY OPERATIONS DURING JANUARY AND FEBRUARY, 1917

By A MILITARY EXPERT

I. THE MILITARY SITUATION

THE coming of the new year found only two real campaigns under way. In Rumania, Mackensen's armies were following up their brilliant successes and gaining fresh victories as they approached the Sereth line; while in the Far East the British had initiated a fresh offensive toward Kut-el-Amara, the full significance of which was not yet disclosed. Elsewhere comparative quiet prevailed, save for intermittent bombardments, the night raiding that now characterizes trench warfare, and an occasional more ambitious attack in force. Germany's peace proposals having been answered by the Entente Allies in no uncertain terms, the belligerents (although rumors of peace continued to persist) redoubled their efforts in preparing for another year or more of conflict. Visits and conferences be-

*The cost of the militia mobilization of 1916 was as follows:
Actual expenditures from June 18 to October 31, 1916, $151,034,566.61. Upon these actual figures the total expenditures up to December 31, 1916, are estimated by the War Department to exceed the sum of $190,000,000.
Estimated current cost for six months' training for a half million men per year by intensive method, including, among other expenses, transportation, rations, clothing, ammunition, and maintenance and replacement of ordnance and quartermaster stores; also including hire of camp sites, maintenance, expenses of cantonments, and pay of instructors and officers, $86,351,854.90.
This latter estimate was made by Major General Leonard Wood before the Senate Military Committee. In comparing the two, however, it should be borne in mind that the militia expenditures covered more than current running expenses and included many expenditures for purchase of semi-permanent material, as horses, motor lorries, etc.

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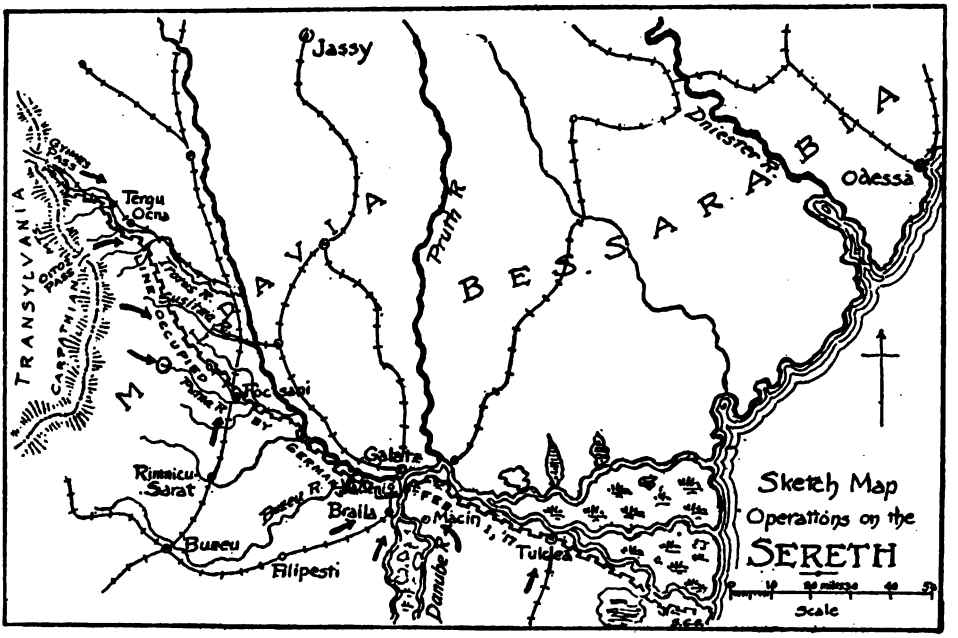

WHERE THE GERMAN ADVANCE IN RUMANIA WAS HALTED

The German front line of trenches on February 1st, since which time practically no activity has been reported in this theatre of the war

tween the generals and statesmen of both allied groups were frequent at this period, which marked a breathing-space in the midst of the major operations.

II. RUMANIA

Mackensen Continues Advance.—During the four months since Rumania had entered the war, her adversaries' conquests had been impressive. All of Wallachia, with its oil and wheat fields, the Rumanian capital with its once formidable fortress, the entire province of Dobrudja save for a ten-mile corner guarded by the bridge-head at Macin—such was the prize taken by the Central Powers. And now their columns, still unchecked, were approaching the fortified line in front of the Sereth, originally built by the Rumanians to resist Russian invasion, now faced about and occupied by these same Russians as allies.

At this time, three well-defined offensive movements were apparent. Falkenhayn's Ninth Army, advancing along the railroad through Buzeu, had just reached and taken Rimnicu Sarat after a five-days' battle. The Danube Army, closing in from the south and west on the line of fortifications in front of Braila, was threatening that city. The third column, composed chiefly of Bulgars and Turks, had swept through the Dobrudja, routed a Cossack division, driven Sakharoff from one defensive line after another, and had finally cleared the south bank of the Danube except for the strongly fortified position at Macin.

Fall of Braila and Focsani.—The next Teuton success was reported from this right flank. After an attack lasting ten days, the Dobrudja Army took Macin on January 3d, and there was nothing left for the

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Russians but to abandon the peninsula entirely. Retreating across a pontoon bridge close to Braila, they apparently left the bridge intact, for the Bulgars followed, close at their heels. Braila, now commanded by the enemy's guns east of the Danube, and beset by attacking columns from the south and west, was in a hopeless position, and was abandoned on January 4th. This town has 60,000 inhabitants, and is the chief grain-shipping port in Rumania.

Meanwhile, a fourth offensive movement was developing. Down through the narrow and difficult passes of the Carpathians that flanked the Russians' right came pouring other German forces, under such leaders as Morgen and Delmensingen. Their appearance in the Putna, the Susitza, and other valleys, northwest of Focsani, at once constituted a serious menace to the Russian right. This turning movement, together with the frontal advance from the southwest, was responsible for the fall of Focsani on January 8th. This town of 30,000 inhabitants formed an advanced stronghold of the Sereth defensive line, and its loss was of greater military importance than that of Braila.

The Advance Halted.—Mackensen, after a brief rest, now continued the advance from Braila toward Galatz, the main key-point left to the Allies on the Danube. The outposts of the defensive line were soon reached, and on January 13th a Turkish force operating along the railroad stormed Vadeni, only six miles from Galatz. The latter city seemed to be seriously threatened, but the Russians, now thoroughly aroused to their danger, made a successful counter-stroke, and retook Vadeni. This proved to be the turning-point of the campaign. A Bulgar attempt to gain a foothold on the Danube delta at Tulcea was repulsed. Other minor Russian successes were reported farther west. In addition to the stiffening Russian resistance, the rigorous winter weather discouraged further progress, although the tempting prize of Odessa lay only 125 miles away. Toward the end of January, the Austro-German troops on this front began to be withdrawn, leaving the line to be held largely by Bulgars and Turks.

Thus ended one of the most brilliant campaigns of the war. The forces engaged in this offensive, it is estimated, comprised 300,000 Austro-Germans, 200,000 Bulgars, and 75,000 Turks. The line now occupied runs from the Carpathians down the Trotus River Valley to a point near Ocna, thence southeast across several small streams to the Putna, following this stream into the Sereth, and so down to Galatz and the Danube. Of the half million Rumanians (estimated) engaged, probably less than half were saved, and most of these troops were too demoralized to be of immediate value. Practically no activity was reported on this front during February.

III. THE WESTERN FRONT

"Inactivity" That Costs.—The respite that winter brings is only a comparative quiet. When the British figures for January show a loss of a thousand men a day in France, it is evident that such wastage is not the result of *in*action. In fact, the activity evident this winter is much greater than a year ago. This policy has been deliberately pursued by the Entente Allies as a weapon of attrition. In addition to the familiar bombardments, hand grenades, and mine warfare, their agressiveness takes the form of numerous night raids, carried out by small patrols operating over "No Man's Land," who harass the enemy and keep him under a constant strain. This type of warfare suits the

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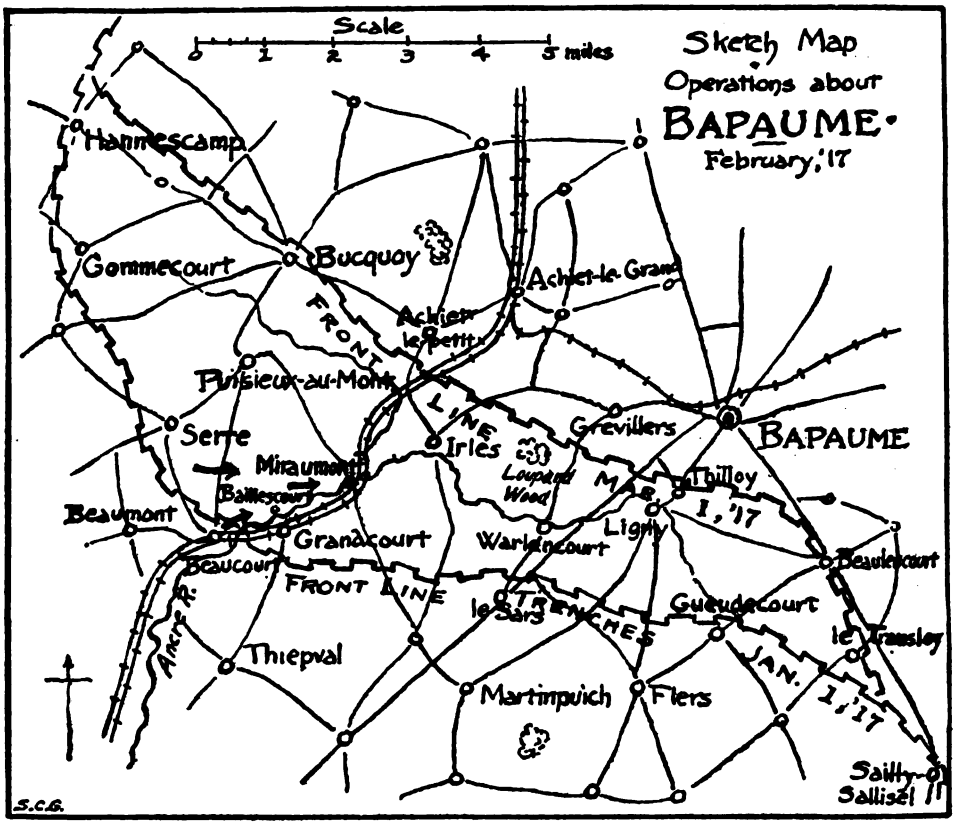

THE ADVANCE OF THE BRITISH ON BAPAUME

The map shows the position of the British front-line trenches on January 1st and on March 1st

individual character of the French and English soldier better than that of their adversaries, who seldom resort to it.

Resumption of Heavy Fighting.—So passed January, but February had another story to tell. With the first hint of more favorable weather conditions, greater activity was evident. Air-craft resumed their normal operations, troop movements on a larger scale were begun, and sharp attacks were launched at various points in the line. The Verdun campaign, it will be recalled, was initiated in February of last year, and in the feeling-out process that now began it was evident that some similar mighty enterprise was expected this year, from one or both sides. The first operations of importance were undertaken by the British in the Ancre Valley. The Germans, for their part, suddenly assumed the offensive in the Champagne (February 16th), where the right wing of the Crown Prince's army pierced four lines of trenches south of Ripont, and took 800 prisoners.

IV. ON THE SOMME

Allied Achievement in 1916.—In General Haig's exhaustive report of the operations on the Somme, published December 29th, it is claimed that the British in 1916 attained their three main objectives; namely, to

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relieve the pressure on Verdun, to hold the Germans on the western front, and to wear down the strength of the enemy. Only the extremely rainy and muddy weather of October, it is asserted, prevented a more crushing defeat of the partly demoralized foe. *Fully half the German army*, the British commander states, met defeat on the Somme—a claim which is substantiated by other evidences of the stream of German troops which were sent to this battlefield, as to an arena, in successive detachments. In this report, General Haig takes the opportunity to pay high tribute to Generals Sir Henry Rawlinson and Sir Hubert Gough, commanding his Fourth and Fifth armies; to the flying corps, the engineers, and the other special services.

British Advance Resumed.—As February went by, it appeared that the British had chosen to renew the conflict on the ground where it had left off in the fall; that the Somme was not to be a closed book; that here, as well as anywhere, they judged, the contest might be fought out to a decision. In the first week of February, taking advantage of the clear weather and frozen ground, the troops north of the Ancre began to exert pressure along the northern bank of that stream. Pushing east to Baillescourt, they thus almost surrounded the town of Grandcourt across the river to the south, and shortly afterward compelled its evacuation. This advance was followed up by others during the next ten days, with the result that a deep wedge was driven up the Ancre, piercing the German line as far as Miraumont. The town of Serre, whose successive tiers of trenches had held firm since the very beginning of the Somme operations, was now seriously threatened from the south and rear. At this stage the British seemed close to a considerable victory.

The Germans Retire.—On February 22d, British troops advancing from Gueudecourt and near Miraumont made an amazing discovery. The Germans were no longer in their immediate front! Other advances confirmed the suspicion that the Germans were retiring over a considerable line. Cautiously the British advance continued, meeting with scant opposition, except from the handful of men left to harass their progress. The German withdrawal had been made deliberately, leisurely, after careful preparations. Everywhere supplies and equipment were found to have been removed, and traps of various kinds laid for the pursuers. Mines and spring-guns were left set in the empty fortifications; even an innocent German helmet might conceal a sensitive bomb.

By the end of February, the full extent of the withdrawal was disclosed, and the British had developed a new and no less formidable position. This new line left the old one north of Gommecourt, running southeast in almost a straight line through Achiet-le-Petit and Loupard Wood, passing a mile south of Bapaume and rejoining the former line near Le Transloy. The strip of territory thus relinquished is eleven miles long, some two and a half miles deep.

The withdrawal of the Germans was evidently planned some time ago, when the British advance up the Ancre began to threaten this whole salient; but its execution was postponed till now, when it would have the effect of disarranging any plans the British might have for an offensive in this sector, compelling them to shift their artillery positions, and otherwise organize their new front. The new German line is straighter and stronger than the old, occupying more commanding ground.

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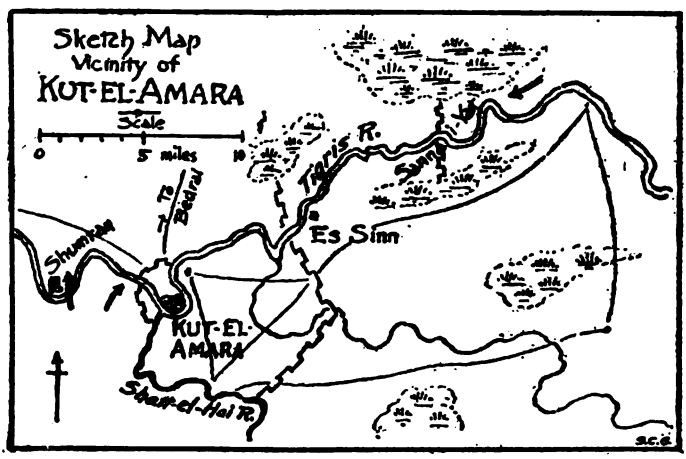
V. THE FAR EAST

The characteristic tenacity of the British has again been demonstrated. When General Townshend's little force, overwhelmed by superior numbers, surrendered Kut-el-Amara to the Turks last April, British prestige in the Far East was at a low ebb. The first Tigris expedition was entirely inadequate in numbers and supplies for an advance on Bagdad, far into enemy country. In the command entrusted to General Maude, these defects had been remedied. His force is estimated at not less than 120,000 men; one estimate places the number as high as 200,000. It has been supplied by means of a light field railroad, and was accompanied by a flotilla of not less than four river gunboats. The English had learned not to do things by halves.



ON THE ROAD TO BAGDAD

On February 24th, General Frederick Stanley Maude, with a force of 120,000 men or more, succeeded in recapturing Kût-el-Amara, which General Townshend overwhelmed by superior numbers, was forced to surrender in April, 1916. The fortifications of Kut-el-Amara and Shumran dominate the route to Bagdad, and thus greatly facilitated the subsequent capture of that city by the British

The operations against Kut began about the middle of December, 1916, with an advance along the southern bank of the Tigris. This bank is much higher and drier than the swampy northern bank, and by following it the British were able to avoid the strong Sanna-i-Yat position, fifteen miles down the Tigris from Kut, which had thwarted their efforts to relieve the besieged city last spring. Laying their field railroad along this bank, General Maude's army made headway slowly at first, turning the Turks out of successive lines of fortifications, including the Es-Sinn position, and consolidating the ground won. By the middle of January, he had reached the Shatt-el-Hai River, which empties into the Tigris directly opposite the deep horseshoe bend within which the city lies.

Still the British ignored the north bank, but pushed their forces, in the face of stubborn opposition, farther west along the stream until they commanded the Shumran bend above Kut, and thus dominated the direct route to Bagdad, and threatened the town itself.

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The Recapture of Kut.—Meanwhile the strong Sanna-i-Yat position, flanked by river and swamp, remained unassailed. Not until February 17th did the British attempt to carry this position, and then their first assaults were repelled. Kut-el-Amara was immediately likened unto Gallipoli. But on the 22d of February, the English penetrated and won a half mile front of this formidable position. On the following day, the westernmost column effected a decisive stroke. The river at this time was swollen from heavy rains, and presented a difficult obstacle, a quarter of a mile wide. The British boldly undertook the crossing, at a point opposite Shumran, and, partly swimming, partly ferrying by means of pontoons, they gained the opposite bank. The town was now in a critical position, surrounded on three sides. Evacuating Kut on February 24th, the Turks, whose main line of communication was already cut, hastily retreated along the Bedrai caravan route to the north.

General Maude lost no time in following up his victory and pressing the retreating Turks, whose flight became more and more disorganized. Accompanied by his river boats, he was able to make rapid progress along the caravan route, and by the end of February, Azizie, almost the half-way point to Bagdad, 110 miles distant, had been reached. During the preceding week, over 4,000 Turkish prisoners had been taken. In all this fighting, the Turkish lack of an adequate line of supplies was evident; the Bagdad railroad cannot yet have been completed, despite reports to that effect. Moreover, reports from the Russian forces in Persia and Armenia, and from a British column moving along the coast from Egypt into Palestine—all these combined to raise high hopes among the Allies of crushing the Ottoman Empire and shattering German dreams of an Eastern kingdom.

VI. OTHER FRONTS

A New Russian Offensive.—A Russian offensive against Mitau attracted considerable attention early in January. Taking advantage of the frozen marshes that made this season most favorable for operations, the Russians advanced along the southern edge of Lake Babit and attacked the German lines on the Aa River. These operations were directed by General Dimitrieff, the picturesque "Bulgar Napoleon" who gained fame in the Balkan Wars a few years ago.

At first successful, to the extent of gaining a few miles and some hundreds of prisoners, the advance was soon checked by the Germans, and the gains to some extent offset by counter-offensives in the region of Kalnzem.

Minor Operations.—No other military operations call for particular mention at this time. In the local fighting on the Italian front, the Austrians have been for the most part the aggressors. Other localities from which occasional encounters have been reported are the Monastir and Doiran regions in Macedonia, the Volhynian theatre in Russia, and the Carpathian ranges near the meeting point of Bukovina, Rumania, and Transylvania.

VII. VARIOUS NAVAL OPERATIONS

Submarine Achievements.—The submarine campaign in the "barred zone," with the tremendous possibilities its outcome suggests, has relegated all other naval affairs to the background. The more legitimate operations of the U-boats against belligerent vessels have attracted little attention, although the reported loss of Allied transports has been heavy, some half

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dozen vessels with a total tonnage of 60,000 having been reported for February.

A Dutch report of a "baby submarine," operating on the high seas from a mother ship, gives some support to the recently conceived American "pill-on-a-pole." According to the officers of the steamer, their vessel was stopped by a German submarine hardly larger than a decked-over canoe.

A Destroyer Engagement.—Two short but sharp encounters between British and German destroyers took place in the North Sea, in a storm, during the night of January 22-23d. In one engagement, which occurred off the Dutch coast, one German destroyer was sunk; another was towed into Ymuiden Harbor in a severely damaged condition.

Another Sea-Raider.—Another German commerce-destroyer (or perhaps the original *Moewe* itself) has been active in the South Atlantic, where it is credited with having disposed of twenty ships. Particularly daring was the exploit of the *Yarrowdale*, which, with a prize crew of sixteen Germans, ran the blockade and carried into Germany 469 prisoners.

VIII. SUMMARY

The campaign in Mesopotamia has brought about a complete reversal in the military situation in Asia, and a restoration of British prestige in the East. Aside from this, there have been no sweeping changes in any of the land theatres.

It has been rather a period of preparation for huge efforts to come, and of feeling out and harassing each other's lines.

What Is to Come?—The developments of greatest moment have been on the sea, in the "zone of terror," where Germany is seeking to throttle the sea-power so vital to England's life. The war is rapidly approaching a crisis. When the U-boats have done their worst, when the straining nations shall have put every resource into another mighty effort, perhaps the end may be in sight.

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The TACTICAL MEASURING ROD

By MAJOR JOHN MCA. PALMER, U. S. A.

[*This article gives an account of the methods of training and selection by means of which German officers are prepared in time of peace for the responsibility of troop leading in war. It was written before the outbreak of the present world war as an explanation of Prussia's military successes against Austria and France in 1866 and 1870. While the article contains no allusion to the war now in progress it throws much light on the primary cause of German military efficiency, and explains the secret of her prolonged resistance against the superior resources of her enemies.*—THE EDITORS.]

WHEN war broke out between Prussia and Austria in 1866, there was a remarkable contrast between the two belligerent forces. The army of Austria was a veteran army led by generals who had been developed in the school of actual war. The Prussian army, on the contrary, was without war experience. None of her soldiers were veterans and all her leaders had entered the army during the half century of peace that followed the Napoleonic wars.*

Having these facts in mind, and possessed of military resources at least equal to those of his enemies, it is not remarkable that Von Benedek, the Austrian commander, should confidently predict a speedy victory for the Austrian armies. But what was the issue? Within six weeks the veteran army had suffered the most decisive defeat in modern times, and Prussian leaders without war experience had demonstrated an unprecedented mastery of the whole art of war. The world was astonished at the results of this brilliant campaign but did not understand their underlying causes. Superficial observers as usual found an explanation in superior armament, for the Prussian infantry was armed with the needle gun, an early form of breech-loading rifle. A few military men, however, found the secret of Prussian success in the system of training which had been perfected by the German General Staff under Von Moltke. Indeed, before 1870 certain progressive French officers had proposed that Prussian methods of military education and training should be applied in the French army. But this was scornfully rejected by its higher commanders, who proudly stated that they were soldiers and not schoolmasters.

The French army also was a veteran army. Its officers and men had learned their trade by actual practice in the Crimea, in Italy, and in Africa, and notwithstanding what they considered to be the "accident" of Königgrätz, they felt the veteran's scorn for such military pedants as they conceived Von Moltke and his officers to be. For practical soldiers have always recognized that the conduct of war is not a science but an art, that tactical judgment and decision are the qualities essential to success, and that mere military knowledge is of scarcely any value in the test of war.

*It is true that a small Prussian force had taken part in the operations against Denmark in 1864, but this brief campaign involved no war experience for the Prussian army as a whole.

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In short, they recognized the important distinction between professional education and professional practice, and, assuming that professional practice is only possible in actual war, they considered that the war-trained leader alone is reliable, and that the best standards of peace-training can be only hypothetical and tentative, if not absolutely valueless.

But the war of 1870 was even more decisive than the war of 1866. Within seven weeks the main campaign was ended and the veteran army of France had ceased to exist. Wherever the troops had met, the German leaders had shown superior leadership, and it finally began to dawn upon the world that Von Moltke had attained the Napoleonic ideal—of an army in which each individual was trained to do the right thing under any given emergency without waiting for orders from above. Napoleon had stated this ideal in one of his maxims, but no army of his had ever attained it. None of Napoleon's marshals could ever act Napoleonically in the absence of the Emperor, whereas the campaigns of 1866 and 1870 had shown that the German leaders, even when isolated and without orders, almost invariably acted in the spirit of Von Moltke. It is not necessary to assume from this that the military genius of Von Moltke was as brilliant as that of Napoleon—but it was more effective from the standpoint of organization; for, such as it was, it pervaded the entire Prussian army.

The Prussian victories over Austria and France were the victories of peace-trained leaders and peace-trained soldiers over war-trained leaders and veteran soldiers. But they were not the victories of military pedants and theorists over soldiers of greater professional practice. An examination of Von Moltke's system of military training completely vindicates the superiority of professional practice over theoretical study, and shows that he had perfected a system of professional practice in peace which was superior in many respects to the actual practice of war. The Prussian leaders before the Königgrätz campaign had not experienced war, but they understood it better and had had more practice in the art of waging it than the Austrian leaders. The Austrian leaders had experienced war, but they did not understand it and had not practised it as thoroughly as had their Prussian antagonists.

This is the real secret of Prussian success. Von Moltke and his predecessors had developed an entirely new method of peace training based on the idea of securing actual practice in the profession of arms in time of peace. All the Prussian leaders were successful practitioners in war before the war began, and each battalion, regiment, brigade, division corps, and field army was commanded, not by a pedant, but by a practical soldier of measured and predetermined capacity to command and lead the fighting unit assigned to him. And not only was this true but, even more remarkable, the great majority of these leaders were indoctrinated with the same military doctrine. In the sudden crises of the campaign they carried out the Supreme Commander's will without waiting for orders from above, because through their system of training they were able to divine what Von Moltke would want them to do in the circumstances, and Von Moltke knew that they could and would do this because their capacity to do it had been predetermined in peace as the condition upon which they held their commands. In short, the Prussian army had developed a method of practising the profession of arms

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in time of peace, and in that service only successful practitioners were permitted to rise to the responsibility of training troops in peace and of leading them in war.

The germ of the tactical method which attained such perfection in the hands of Von Moltke seems to be found in an exercise which Frederick the Great invented in order to develop his own tactical judgment. Carlyle gives the following interesting glimpse of the great king in his travels:

> For Friedrich is always looking out, were it even from the window of his carriage, and putting military problems to himself in all manner of scenery— "What would a man do in that kind of ground, if attacking, if attacked? With that hill, that brook, that bit of bog?"—and advises every officer to be continually doing the like. That is the value of picturesque or other scenery to Friedrich and its effect on good Prussian officers and him.

And what would a man do under such circumstances? Would he write a treatise on attack or defense? Would he deliver a lecture on field fortification? That is about all that the orthodox military education of England or America would equip him for. But that is not what Frederick would do—he would simply *make a decision and issue an order.*

To perfect himself in forming tactical decisions and in the mechanism of issuing orders adapted to varied terrains and situations the royal general was "always looking out, were it even from the window of his carriage." For this is essentially practice in the art of war as opposed to theoretical study. It is said that in his early manhood he felt, as all thoughtful young soldiers must have felt, that no amount of military knowledge can prepare one for the actual test of military emergency, that the difference between the military pedant and the ready soldier is the difference between *knowing* and *doing*, that there are no universal rules in tactics that can be acquired by theoretical study, and that when the first emergency comes there can be no searching of the memory for some stereotyped solution. So in his rides he would assume a military situation, imagining himself in command of a body of troops, with the vague assumption that an enemy might be encountered in one direction or another. Then later in the ride he would, perhaps, imagine sudden contact or surprise; the hill just in front held in force and his imaginary column subjected to the fire of artillery, his cavalry swept in by a successful hostile charge, his advance guard falling back in confusion. Under these conditions what should he do? What orders should he issue? How should he issue them? In course of time he found that by this practice he was developing his tactical judgment, perfecting the art of issuing clear and judicious orders, and applying his theoretical and historical studies to the practical *business* of war. Notwithstanding the fact that few generals have had more practice in war, he continued this exercise to the end.

While this method furnishes a means of self-culture, it becomes even more valuable in enabling a competent tactical instructor to train other officers. In this case the instructor limits himself to giving the situation and requires the student to make the decision and issue the orders to the imaginary troops. After the order is given the instructor is able to apply his tactical knowledge to the criticism of the concrete arrangement proposed. If the instructor sees that the original arrangements are faulty, that a flank is left exposed or important reconnaissance omitted, he can bring speedy

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retribution in a new development of the situation. In this case the student's attention is suddenly called to a new crisis. The instructor points to the neglected quarter of the horizon and shows how from yonder low-lying hill the enemy has suddenly appeared in force. One of the flanks of the student's attacking line is under unexpected hostile fire. From being the attacker he finds himself the attacked. The situation demands immediate and effective counter measures, not disquisitions on the science of war or military history.

"What do you *do?*" insists the instructor.

"I would send a staff officer to Major X and tell him——"

"Very well," says the instructor, "I will be the staff officer. Give me precisely the order that you would give."

But the student is now grappling with the very problems that confront new leaders on the field of battle. What *shall* he do? He searches his memory for historical precedents to guide him, but in vain, because, first, this exact situation never occurred in all military history, and secondly, because even if there were a precedent there is no time for the deliberate historical method.

The instructor is waiting for the order. Two precious minutes have passed and now the student is informed that his threatened flank has begun to crumble under fire. Whole platoons are scurrying back to the cover of the brook in rear. The disorder is beginning to extend by sympathy from the threatened flank to the front. The attack so confidently initiated is checked and unless the equilibrium is instantly restored by some new and effective counter measure the result is defeat.

It is now too late for orders to Major X. The agitated student sees that nothing but a properly placed reserve could save him. But he had omitted to provide it in his initial order and his own judgment now tells him that he is repulsed and that defeat is the inevitable consequence of his original decision and order. The instructor might have told him so at first in a highly entertaining lecture on reserves and their uses, but he preferred to give his charge some actual professional practice, to let him undergo the stress of emergency and the pain and humiliation of defeat.

The exercise has been positive professional practice, and the student has actually undergone a war test. He has had to deal with the same intellectual problem and much of the moral stress that would have confronted him in war. He has learned a lesson through the burning sting of defeat. The defeat, however, has been where it belonged, in his own mind and spirit. Actual troops have not suffered from his incapacity. The dead and wounded are imaginary, and the captured guns and colors are not a permanent dishonor to the country that he serves.

On the ride home the instructor discusses the engagement with him. His humbled spirit receives some balm in the information that his error was one of the invariable errors of beginners in the practical art of troop leading, and that it is better to learn the lesson on the manœuvre ground in peace than as American and English leaders have generally had to learn it—on the actual field of war.

Although the method of Frederick the Great is a method of self-culture as well as a method of training others, it has another use of even greater value. Let us suppose that a class of young officers is assembled for

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professional practice under an experienced officer of recognized tactical judgment. Let us also suppose that they are educated soldiers, familiar with theoretical tactics and military history and therefore prepared for professional practice in solving actual tactical problems. For the first situations presented to them, there will be a great variety of solutions and few of them will be good. There will be few definite and concise decisions and the orders will generally be vague and incoherent. The students will resemble graduates of a law school dealing with the first problems of actual practice. At this stage of development, the brighter men will propose complicated and ingenious solutions that must necessarily break down in the severe simplicity of war, and this the instructor will demonstrate to them by unmistakable defeat in the development of the exercises. Most of them will reveal a too fertile and undisciplined imagination leading them to scatter their forces to cover every possible contingency. Few of them will provide for proper reconnaissance, and the instructor will see to it that this will lead to the punishment of surprise. In short, the early stages of the course will show general ineptitude and general indecision, and this indecision will be of two kinds, one kind due to too much imagination and the other to not enough. Gradually, practice will develop facility in the estimation of military situations and familiarity with the simple business methods involved in the issuance of orders. The members of the class will begin to form themselves into three groups. One group will include the men who are exceptionally endowed by nature with the rare gift of tactical judgment and decision of character without which no man can become a successful troop leader. These men will invariably propose sound and workable tactical solutions expressed in an order that no subordinate can misunderstand. They will possess that rare eye for ground that is indispensable to the development of the general-staff officer or the higher commander in war. The second group will comprise men of normal tactical capacity, men who will grow in strength with greater experience and practice. These are the men who, as effective leaders of companies, battalions, and regiments, may continue to grow into equally effective leaders of brigades and divisions. In the third group—and it will be by no means a small one—will be found men who lack the tactical gift, men who are uniformly inept, men who are occasionally brilliant but generally erratic and incoherent, men who can execute well under the eye of a superior but who lack independence of judgment and initiative of character. This third group will, of course, comprise all those of deficient ability, but, more important, it will differentiate another class of really able men who simply lack the particular kind of ability that is required for successful leadership on the battlefield. It does not follow that these men are barred from useful and honorable activity in the military service. Some of them have the practical business capacity that will make them excellent supply officers. They may not have the gift of expending ammunition effectively on the battlefield, but they may be masters of the important art of bringing up supplies of ammunition from the rear. Many of them will make useful adjutants-general and military administrators. Some of them will have gifts for the more technical or mathematical branches of military science, such as fortification or the development of modern

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ordnance. Some of them may have rare scientific gifts through which the developments of modern science will become available for military purposes. The application of Frederick the Great's measuring rod does not exclude such men from honor and distinction in the profession of arms; it simply saves them from misapplying their talents in the wrong field.

The essential characteristics and values of the Prussian method of peace training, which have been illustrated in connection with the simple terrain exercises of Frederick the Great, constitute little more than the germ of the elaborate system of training and inspection which was finally perfected by Von Moltke and his officers. Nor was this evolution continuous and uninterrupted. In 1806, the Prussian army was overwhelmed by Napoleon. The prestige of Frederick the Great had resulted in a blind reverence for the tactical forms that he had developed, and the Prussian army had forgotten the practical spirit which always led him to adapt forms to the actual facts of the military situation. They had come to treat as an exact or mathematical science what he had always treated as a flexible art. In the meantime the French Revolution had released immense new military resources. France had become a nation in arms and Napoleon, the most consummate of military artists, was opposed to the pedants who had succeeded Frederick. The result was Jena and Auerstädt and the overthrow of the old Prussian military system.

In these days of humiliation, Prussian military thinkers, like Scharnhorst, accepted from Napoleon the idea of the nation in arms, but in abandoning the obsolete military organization of Frederick's time they returned to his practical standards of military instruction. Since Waterloo, Prussian training has been based on the idea that the conduct of military operations is an art, that a successful troop leader is not a military critic or essayist but a practical artist, that under proper methods this practical artistic gift can be discovered, measured, and developed in time of peace, and that the whole object of peace organization and training is to find and develop troop leaders and general-staff officers possessed of this practical gift. If this object be attained, all the other essentials to military success follow as a matter of course. If this object be not attained, no quantity of military resources, no perfection of equipment or armament, and no elaboration of tactical formations can lead to victory within the brief period of modern military crises.

In the actual training of officers under the modern Prussian system the "terrain exercise" on actual ground is generally preceded by exercises known as map problems. The student is given an accurate topographical map showing all the military features of a suitable region. He also receives a "situation" giving his own position on the map, with a statement of the troops under his command, the location of supporting troops, and such information with reference to the enemy as he could reasonably expect to have under actual conditions of service. The "situation" generally gives him the instructions or orders of a supposed superior commander directing him to employ his command in the execution of some military duty. After a careful study of the map and the other features of the situation, the student is required to write out concisely what he conceives his mission to be, how he proposes to accomplish it, what orders he issues to each component of his command, and finally

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the reasons for the arrangements so adopted. In other words the student-officer is called upon to *apply* his knowledge of tactics to a concrete military situation. The intellectual problem submitted to him is identical with that which confronts an actual commander in war. It differs from the terrain exercise in this, that more careful deliberation is permitted, and an opportunity is given to form systematic mental habits in estimating military situations. In this exercise, also, it is practicable for the instructor in criticising the written solution to get a thorough insight into the mental processes of the student, with a view to measuring his native capacity and correcting and guiding his future tactical studies.

In solving his first map problem even the most accomplished officer is soon astonished at his lack of facility and business capacity. As he writes the reasons for his tentative orders, the analytical process develops new and unexpected views of the situation. New features of the terrain begin to attract attention. As he states his suppositions in regard to the probable strength, location, and intentions of the enemy, entirely new possibilities occur to him and he begins to appreciate how military operations are affected by the uncertainty known as "the fog of war." Beginners generally require four or five hours for the solution of simple problems of this kind, but the exercise develops logical and rapid processes of thought as well as facility in the technique of order writing, and after a year's practice the student, if endowed with the tactical gift, will form a similar decision in a few minutes and be able immediately to dictate a suitable order.

Thus by means of problems on the map it is possible for a skilled instructor to develop the tactical judgment of junior officers, to train them in the habit of forming sound tactical decisions, and gradually to eliminate the gross tactical errors which are almost invariably characteristic of beginners. It is largely for this reason that the Germans and others, such as the Japanese, who have adopted the wiser spirit of their methods of training have been able to win decisive victories in short campaigns. They do not, like the Americans or the English, require a year or two of further training under fire in order to develop troop leaders by costly elimination. German officers have their Bull Runs and Shilohs, their Spion Kops and Paardebergs, but they write them in ink instead of writing them in blood.

The deliberation of the map problem is more or less artificial, and it is therefore best adapted to practice in the preparation of the initial orders for a march, an attack, or other tactical exercise. In actual war the situation after contact with the enemy is ever changing, and the conflict of intelligence and will between two opposing commanders cannot be illustrated in written exercises. The map problem has therefore been supplemented by another exercise known as the war game or map manœuvre. In this case the instructor gives out two "situations," one to each of the opposing commanders. The opposing forces are represented on the maps by suitable colored markers. After receiving the decisions and orders for the two sides the instructor moves the markers as the troops they represent would move in execution of the orders. In this way each commander's situation is continually modified by the action taken by his opponent, and a spectator of the game sees an actual contest between two leaders, each groping toward the other through the

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veil of imperfect and incomplete information. This exercise develops decision and initiative and gives practice in assuming the responsibility of command. Here, too, something of the actual psychological effect of war is introduced, the instructor decides the effect of fire upon opposing lines, and finally, when the conflict is fully developed, the opposing troops are marked out on the map and the two opposing commanders for the first time are given an opportunity to see the whole situation.

In order to correct the artificial medium of the map, similar tactical exercises are also developed on the actual ground. The simplest of these, the terrain exercise of Frederick the Great, has already been sufficiently described. In another, known as the tactical ride, a group of officers representing a commanding officer and his several subordinates may ride for days through all the varying tactical situations of a campaign. In this way, without the fatigue or expense of moving actual troops, commanding officers are given all the tactical problems that they would meet in actual operations. March orders are prepared, camp sites selected, defensive positions occupied, hostile positions attacked. Where the peace stations of troops are widely scattered and it is impracticable to assemble them in large masses, division commanders can still instruct or test and measure the tactical capacity of their brigade commanders and staff officers. Similarly, the brigade commander can instruct and measure his colonels, the colonel his battalion commanders, the battalion commander his captains, and the captain his lieutenants and non-commissioned officers. In short, through this method commanding officers are given a positive measuring rod for determining the tactical capacity of their subordinates. If the commanding officer is himself a man of trained tactical judgment the results of this measurement are infallible.

In all the exercises described above we have considered the instruction and measurement of officers apart from the instruction of the troops. But in all modern armies the same general method of applying tactical principles to concrete situations is employed in the training of the organized tactical units. Under modern conditions the formal or mechanical drill of soldiers forms but a small part of their business. Modern soldiers are trained through tactical manœuvres, and a tactical manœuvre is simply the employment of a military force to solve a given tactical situation. The actual manœuvre differs from the map manœuvre only in this, that actual troops replace the colored markers and actual ground replaces the map. The purely tactical problems are precisely the same. The only new element introduced is the friction resulting from human fatigue and human misunderstanding. The officer who can apply his tactical knowledge and judgment successfully in a map manœuvre may still lack the physical and nervous strength to lead troops successfully in a similar exercise on the ground. But it is certain that no officer who lacks the tactical judgment and technical training to command a represented force on the map can hope to exercise the command of troops on the manœuvre ground and much less under the increased stress of battle.

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The MONTH

News and Notes on Military Affairs

A RECENT number of the *Scientific American* contains an interesting analysis of the strength of the battle fleets of Germany and the United States, allowing for losses during the war and on the basis of ships now fit for commission. It is estimated that Germany now has 26 dreadnaughts with 252 heavy guns of a total energy of 12,721,920 foot tons, and the United States, 12 dreadnaughts with 128 heavy guns of a total energy of 7,417,736 foot tons. The comparison of pre-dreadnaughts is more in our favor. The estimate for Germany is 19 of these ships with 76 armor-piercing guns with an energy of 1,500,000 foot tons, while we have 22 ships with 96 of such guns with a total energy of 3,876,545 foot tons. The author points out that "dreadnaughts and not pre-dreadnaughts will decide the naval campaigns of the future."

The Navy Department announces that on March 3, 1917, the number of enlisted men in the service was 59,349—an increase of 12,002 over the enlisted personnel on March 3, 1913. The number of vacancies in enlisted personnel on March 3d was 22,232, irrespective of reserves. It still remains true that, on account of the lack of men, we cannot put all our available ships in active service.

The naval estimates announced on February 17th in the British Parliament provide for 400,000 men in the British Navy during the current year. It was later stated that the estimates were subsequently raised to provide for 450,000 men.

The Marine Corps is practically the only branch of our military and naval establishment which is able to maintain its authorized strength. The Marine Corps on March 1st numbered 12,661 men, the largest number ever enrolled in the Corps.

Rear Admiral Bradley A. Fiske has recently described, in the *Army and Navy Journal*, the newly invented torpedoplane, as follows:

We can only hope to catch up with the other countries of the world by including in our naval programme the most effective new inventions, and the torpedoplane, under favorable conditions, would make the $20,000 airplane a worthy match for a $20,000,000 battle cruiser. That the torpedoplane will become an important factor in naval warfare in the near future many people have no doubt. It is a scheme whereby the regular Whitehead auto torpedo may be launched from an airplane as effectively as it is launched from a destroyer.

The aviator approaches his target from a great distance and high up in the air, and when, say, six or seven miles away he volplanes toward the water, runs above the surface of the water a short distance, heading toward his target, and when ready simply pulls a lever. The action of pulling the lever releases the torpedo, which is rigidly held under the airplane, and at the

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same time throws back the starting lever, with the result that the torpedo falls into the water in the same way as if it had been dropped from a destroyer.

Strenuous efforts are being made to enroll volunteers for coast patrol work. Meetings have been held in New York, Boston, Gloucester, and other points along the Eastern coast. So far the volunteer patrol forces are under the commandants of the separate naval stations which, it is stated, does not make for efficiency.

The New York Legislature has passed a law for a certain measure of military training for all boys under 18.

Assemblyman Meyer's bill to provide compulsory training on the lines of the Plattsburg camps for men between 19 and 23 was rejected by the Committee on Military Affairs, although that committee adopted a resolution urging Congress to provide for universal military training and service.

One of the most valuable recent reports on military policy is that of the Special Committee of the Chamber of Commerce of New York, which included Hon. Elihu Root and Hon. Robert Bacon. The committee, besides making a strong recommendation of the Chamberlain and General Staff bills, had this to say about the immediate situation:

Your Committee feel bound to express a feeling of grave apprehension and distress caused by a conviction that preparation for utilizing even the forces which we now have is not being pressed with the vigor and effectiveness demanded by the present exigency. Under the present laws many things might be done and ought to be done promptly. We ought to be driving with all our force in the manufacture of submarines and aeroplanes and cruisers and large-calibre high-power guns and shells and field artillery and machine guns and rifle and ammunition of all kinds, and a hundred other things necessary or useful in modern warfare. Manifestly, we are not doing it. If we were doing it, the evidences would be patent to every one in the country. Plainly we are not. It seems that very little is being done.

The Provisional Battalion for the instruction of future reserve officers at Princeton University includes nearly 1,000 students. The work is in charge of Captain Stuart Heintzelman, U. S. A.

The *Scientific American* states that there are now over 100 airplanes in flight service in the United States military service to-day, as compared with 12 a year ago. There are 50 rated military aviators, in addition to 50 officer students and 50 Reserve Corps aviators in various stages of proficiency. Since the beginning of aviation in the United States, about 650 elementary licenses have been issued and about 70 expert licenses.

Replying to a question as to the constitutionality of universal military service under federal laws, Senator Chamberlain recently wrote:

I believe that there is no question about the right of Congress to enact such a law as that reported by me from the Military Affairs Committee. It is the same old trouble between the National Guard and the federal authorities. The infernal quarrel which we have had since colonial days—and which seems to be as acute now as then—is likely to come to the front in

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the critical time and endanger the very life of our country."—*Army and Navy Journal.*

There is no real question as to the constitutionality of federal legislation covering this subject, and we shall expect to cover the matter fully in a subsequent issue.

The Navy League has announced an ambitious programme, which includes assistance in recruiting for the naval service, both active and reserve, the furnishing of articles of clothing and equipment not now furnished by the Government, and, in the event of war, the maintenance of a Navy League War Relief Fund.

The officers of the Oregon National Guard have declared for universal training. This movement among the National Guard of the country is beginning to spread and ought soon to have some concrete influence.

A table in a recent number of the *Army and Navy Journal* shows that the number of men furnished by the various states on the call of the National Guard into federal service was 158,664, being 59.2 of war strength. The highest percentages were—Washington 99.9 per cent. of war strength, Rhode Island 94.4 per cent., and Massachusetts 95.1 per cent. Illinois supplied 64 per cent. of her full strength, New York 61.5 per cent., California 64.5, and Pennsylvania 52.9 per cent.

For those interested in the progress of the Navy, the Navy Book, compiled by B. R. Tilman, Jr., and issued as a Senate document, is valuable. It contains summaries of appropriations from 1888 to 1917 inclusive, reporting important appropriations of Congress, and tables showing the estimated naval strength of ships and personnel in the United States and various foreign countries.

The United States Navy Year Book gives the following tables, indicating the tonnage strength of the Navy, not including new vessels authorized by the Navy Bill, passed on March 4th.

The following table gives the number and tonnage of vessels of each class that are listed as fit for service:

Type	No.	Displ'm't.
Dreadnaughts	12	307,450
Pre-dreadnaughts	25	340,146
Armored cruisers	10	140,080
Cruisers, first class	5	46,465
Cruisers, second class	4	25,065
Cruisers, third class	16	50,820
Monitors	7	24,964
Destroyers	49	43,585
Coast torpedo vessels	16	6,695
Torpedo boats	17	3,140
Submarines	42	15,722
Tenders	8	31,927
Gunboats	28	25,937
Transports	4	22,235
Supply ships	4	25,400
Hospital ship	1	5,700
Fuel ships	21	253,930
Naval yachts	14	8,957
Tugs	47	19,568
Special types	8	45,954
Total	338	1,443,746

The table of ships under construction is as follows:

Type	No.	Displ'm't.
Dreadnaughts	5	160,600
Destroyers	9	9,911
Submarines	33	21,093
Gunboat	1	1,575
Transport	1	10,000
Supply ship	1	8,500
Hospital ship	1	9,800
Fuel ships	2	29,000
Tugs	2	1,150
Total	55	252,629

The ships authorized and appropriated for, some of which are now being laid down, are as follows:

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Type	No.	Displ'm't.
Dreadnaughts	4	130,400
Battle cruisers	4	139,200
Second-class cruisers	4	28,400
Destroyers	20	23,700
Submarines	30	22,590
Special type	1	10,600
Total	63	354,890

The grand total of ships completed, under construction, and appropriated for is as follows:

Type	No.	Displ'm't.
Dreadnaughts	21	598,450
Pre-dreadnaughts	25	340,146
Battle cruisers	4	139,200
Armored cruisers	10	140,080
Cruisers, first class	5	46,465
Cruisers, second class	8	53,465
Cruisers, third class	16	50,820
Monitors	7	24,964
Destroyers	78	77,196
Coast destroyers	16	6,695
Torpedo boats	17	3,146
Submarines	105	54,455
Tenders	8	31,927
Gunboats	29	27,512
Transports	5	32,235
Supply ships	5	33,900
Hospital ships	2	15,500
Fuel ships	23	282,930
Naval yachts	14	8,957
Tugs	49	20,718
Special type	9	56,504
Total	456	2,045,265

The Mayor of New York City's Committee of One Thousand on National Defense recently transmitted to Congress the following resolutions:

Whereas, The raising of a volunteer army capable of defending the Nation against a Power of the first class would multiply many times the confusion and distress that attended the operation of the volunteer plan last summer, disrupting the Nation's business, bringing destitution upon the wives and children of mature men whose patriotism would lead them to enlist, and leaving free from military duty hundreds of thousands of young men whose service would cause the minimum of loss: be it

Resolved, That the executive committee of the Mayor's Committee of 1,000 Citizens on National Defense of the City of New York earnestly urges upon Congress that, in the exercise of its rights under the Constitution, it should enact laws embodying the principle of universal military training and service and providing for such methods of selection as will bring first into training and service that class of the male population which, from both economic and military considerations, is most properly available.

The United States Senate has issued as Document No. 695 a pamphlet of much value, entitled "The Militia," by James Brown Scott, a leading authority on International Law and Major in the Officers' Reserve Corps. This pamphlet is of value to all students of the subject.

Major General Hugh L. Scott, who has acted as Chief of Staff since November 17, 1914, has been reappointed. He will retire on account of age on September 22, 1917, except in the event of war, in which case he would probably continue as Chief of Staff.

A compulsory service bill to provide the requisite strength for the National Guard under the Defense Act has been passed by the state of Utah. This means selective compulsion; that is, forcing one man into service by letting another go on the basis of chance. The system is wholly vicious and cannot last. Perhaps, however, it is as well to demonstrate its impossibility by actual experience.

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THE GENERAL STAFF PLAN

A STATEMENT OF A SYSTEM OF NATIONAL DEFENSE BASED UPON UNIVERSAL LIABILITY TO MILITARY TRAINING AND SERVICE

Prepared by the War College Division of the General Staff, February 14, 1917.

(Owing to lack of space the sections of the statement dealing with the Coast Artillery, Permanent Personnel of the Army, Registration, Physical Examinations, and Exemptions have been omitted—THE EDITORS.)

UNDER date of December 12, 1916, the Chief of Staff directed the War College Division to submit a plan for training a National Army along the lines of its recent report (WCD 9832–1), but going more into detail. In connection with this plan, the Chief of Staff desired an estimate of the cost of such a force and a comparison of such cost with that of the Regular Army and National Guard as they would ultimately be under the National Defense Act. He also suggested that consideration be given to a scheme for sending men selected for training in the most northern portions of the country to places where outdoor training could be continued in winter, together with an estimate of the cost of such a project.

2. The plan, therefore, must provide for the raising, equipping, and training within a reasonable time of about 4,000,000 men, and for the organization of 1,500,000 men who must be ready to take the field at the outbreak of war, and of 1,500,000 others who must be available for active service within three months after war is declared. It must also provide for the proper utilization of some 1,000,000 unorganized reserves whose organization prior to the existence of a national emergency is considered unnecessary and undesirable. Moreover, this plan must include methods which will make it certain that the burden of national defense will bear equally upon all classes of persons. In other words it must be democratic in every respect. It should also, wherever consistent with the furtherance of the ultimate object to be effected, namely, national security, take into consideration the convenience and welfare of the individual citizen. It should ignore the individual whenever his interests conflict with those of the Republic.

3. *Scope of the Plan.* Taking into consideration the requirements, both of peace and war, it is obvious that this plan must provide the following separate organizations: The Oversea Garrisons, comprising the forces necessary to hold our positions in the Philippines, Oahu, and Panama, and the garrisons of Alaska and Porto Rico; the Frontier Forces, comprising the personnel of the mine defense at home and a small mobile detachment for emergency use in time of peace; and the national army of trained reservists, as described in paragraph 2, above.

4. *Permanent Personnel.* In order to meet the requirements of the three forces above described, it will be necessary to provide a sufficient permanent personnel for the following purposes:

(a) Oversea Garrisons. This force will be composed of permanent soldiers and will consist of the organizations necessary to garrison the Philippines,

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Oahu, Panama, Alaska, and Porto Rico. The garrisons assumed for this purpose are the same as those outlined in the Military Policy (WCD 9053-90), September 11, 1915, with a total strength of about 97,000. It is possible that, due to future changes in our relation to the Philippines, the garrison for that possession may be materially reduced, but in that event troops no longer needed there may be required for other oversea garrisons. For the present, it is assumed that the total strength of the oversea garrisons will remain as above stated.

(b) Frontier Forces. These forces will comprise a mobile detachment consisting of two infantry brigades and a cavalry brigade, with the necessary auxiliaries required for emergency purposes. It will also include the mine defense of the fortifications at home, which, it is believed, should be composed entirely of permanent soldiers, as it will be necessary for this force to function at full efficiency at the very outbreak of hostilities. The total strength of the frontier force is estimated to be about 29,000. It is believed that this emergency force will be of sufficient strength to meet all small emergencies which do not justify calling out trained reservists. During the period of transition, before trained reservists become available, and especially in view of the present situation along the Mexican border, the force indicated is probably too small. This condition is met in the plan by the assumption that those organizations of the present Regular Army ultimately destined for the oversea garrisons, but now stationed in the United States, will be retained in the United States until quarters are prepared for them at their proper stations, and that some of them may be retained even longer if the situation on the border makes this necessary.

(c) Training Forces. The training forces will comprise those units which are necessary for the training of the large army of reservists who are to form the first and second reserves of the national war army. The permanent personnel of these forces will be limited to those officers and enlisted men who are necessary for purposes of training. The strength of the training forces must, of course, be measured by the number of reservists to be trained each year, and they will be given in more detail after a consideration of the requirements of the first and second reserves.

(d) Other forces. These include the officers and enlisted men of the various staff departments required for the administration of the military establishment as a whole and which cannot be properly included in any of the three categories above mentioned.

II. THE TRAINING FORCES

1. *Relation to the Reserves.* In order to arrive at the strength of the Training Forces, it is necessary, first, to consider the general strength and organization of the first and second reserves. Under the conditions of the problem, it is assumed that the first reserve shall consist of an army of 1,500,000 men capable of immediate mobilization, and that the second reserve shall consist of a similar force capable of mobilization within 90 days after the outbreak of hostilities. Taking 1,500,000 men as the strength of the first reserve, it is proposed to organize this force into a coast artillery reserve of 60,000 men and a mobile field army consisting of 48 divisions, with proper corps and field army auxiliaries, and having a total strength of about 1,440,000 men.

2. *Numbers Available for Training.* It is estimated from a study of census statistics that in the year 1917 about

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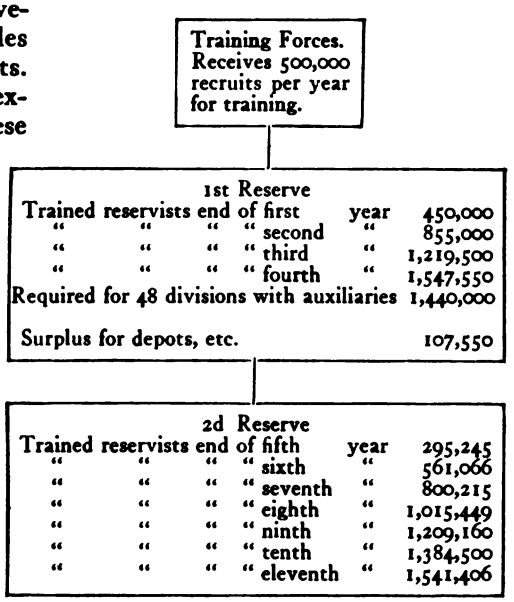
1,000,000 young men will reach their nineteenth year. This includes native-born males and foreign-born males who are sons of naturalized parents. It is almost impossible to make an exact estimate as to the number of these who will be actually available for military training. There must be a considerable number who will be rejected on account of physical unfitness, and in addition thereto a certain number who will be exempted on account of the dependency of relatives. The actual number available may vary from 55 per cent. to 75 per cent., depending largely upon the physical standards prescribed. For the purposes of present discussion, it is assumed that the total rejections and exemptions will include about 42 per cent., leaving 58 per cent. available for training. Under this assumption, the total number actually available for training will be 580,000. Taking from this number 60,000 to be trained for the Navy and Marine Corps, we have 520,000 to receive training in the army, or 500,000 per year for the mobile field army and 20,000 per year for the coast artillery. This estimate is very conservative, and it is probable that the actual numbers available for training will be greater, but an increase in these numbers will have no effect on the plan of organization, and the general effect will simply be to fill the first and second reserves in a less period of time.

Taking this number of 500,000 per year as the number to be trained for the mobile field army, we will now consider the further organization and composition of that force.

3. *Graphical Representation of Relation of Training Forces with Reserves.* The general relation between the training forces and the reserves is shown in Figure 1, as follows :

FIGURE 1


Training Forces. Receives 500,000 recruits per year for training.
1st Reserve
Trained reservists end of first year 450,000
" " " " second " 855,000
" " " " third " 1,219,500
" " " " fourth " 1,547,550
Required for 48 divisions with auxiliaries 1,440,000
Surplus for depots, etc. 107,550
2d Reserve
Trained reservists end of fifth year 295,245
" " " " sixth " 561,066
" " " " seventh " 800,215
" " " " eighth " 1,015,449
" " " " ninth " 1,209,160
" " " " tenth " 1,384,500
" " " " eleventh " 1,541,406

In constructing the above diagram, it is assumed that the training forces will receive 500,000 recruits per year for training and that the annual loss thereafter due to casualties and exemptions of all kinds will be 10 per cent. per annum. Under these assumptions, it is seen that at the end of the fourth year the first reserve will contain 1,547,550 trained reservists, or 107,550 in excess of the number required to form the first field army. Similarly, it is seen that by the end of the eleventh year the second reserve will have attained its full strength with a surplus of nearly 100,000 trained reservists. At the end of the eleventh year, then, we would be able to mobilize the first and second reserves at full strength with a surplus of more than 200,000 trained reservists and with 500,000 recruits undergoing training. At the end of the thirteenth year we would have trained personnel for the first and second reserves, with about 1,000,000 men undergoing train-

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ing or in depots and prepared to replace losses.

It is also seen from an examination of Figure 1 that in order to supply the necessary strength of the first reserve in four years, the training army must train approximately one third of that strength each year. This fixes in a general way the proper numerical relation between the strength of the training forces and the strength of the first and second reserves. Having this relation in mind, it appears that for each division of the first reserve the training forces must train about one third of the war strength of that division each year. This fixes the number of divisions of the training forces at about one third the number to be formed in the first reserve, or, as 48 divisions with a proper proportion of field army and corps auxiliaries are required for the first reserve, there should be training cadres for 16 such divisions in the training army.

If it should develop that more than 500,000 recruits will be available for training each year, there will be no modification in the organization suggested above. The training forces should be so organized as to handle this over-strength, and, so far as the reserves are concerned, the effect will be simply to diminish the time required for service in the first and second reserves. For example, if 75 per cent. of the total military population should be found available for training, the training forces of the mobile field army would train 670,000 recruits per year. In this event, it would only be necessary for the reservists to serve three years in the first reserve and five years in the second reserve in order to furnish the necessary numbers. The organization of the training forces proposed herein is sufficiently flexible to provide for a considerable increase in the number of reservists to be trained as the population increases.

4. *Relation Between Divisions of the Training Army and the First and Second Reserves.* Figure 2, on page 185, shows the relation that will exist beween a training division and the corresponding divisions of the first and second reserves.

If the total number of recruits is 500,000 per year, the average number to be trained by each of the 16 training divisions will be 31,250. The training division in this case is assumed to comprise one Field Service Regulations division with a proper proportion of auxiliaries required for forming army corps and field armies. Figure 2 shows that such a training division will supply three reserve divisions with trained reservists and that at the end of the fourth year the three reserve divisions taken together will be able to mobilize an army corps or field army of 90,000 men with a surplus of about 6,700 trained reservists to form depots. Similarly, at the end of the eleventh year there will be enough trained reservists to form a corresponding army corps or field army in the second reserve.

It is considered important that this definite relation between training divisions and reserve divisions should be definitely established when the plan first goes into operation. While the organization of the first reserve will not be complete until the end of the fourth year, it is regarded as a distinct step in preparedness to begin the organization at once and to establish and localize all tactical units in the reserve so far as practicable. At the end of the first year, each reserve divisional area would comprise a strong trained nucleus for a war-strength division. If time permitted, each of these divisions would be completed by the absorption of untrained

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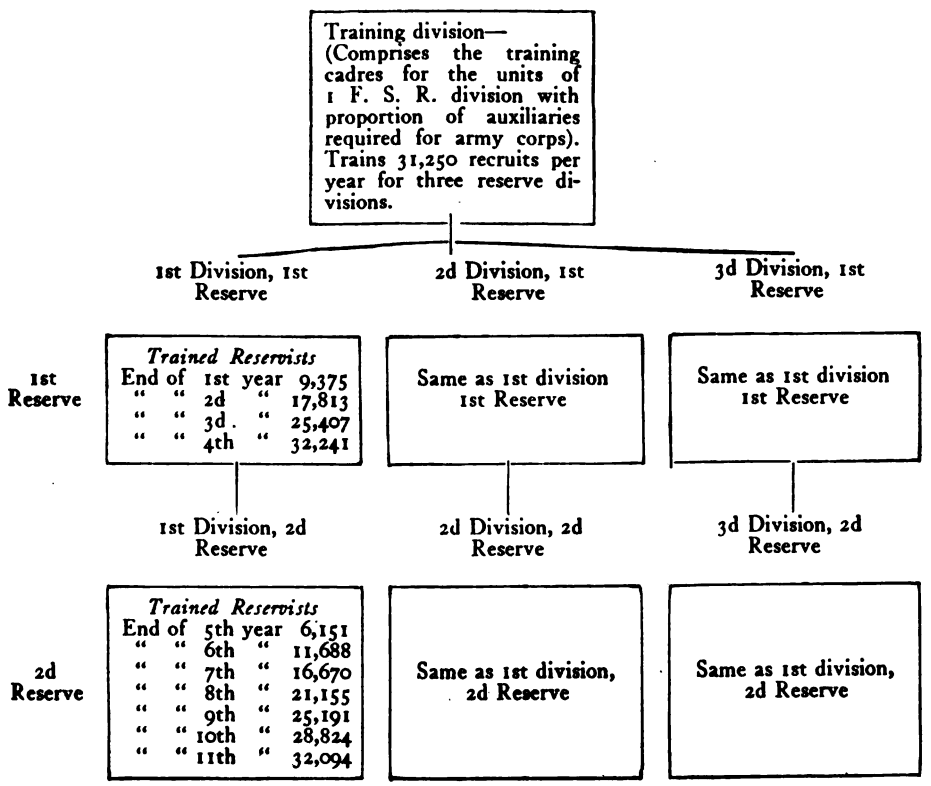
men liable to military service. Or, if necessary, by a transfer of trained personnel, one division in each group of three could be immediately mobilized at full combatant strength and still leave a training nucleus for the other two.

In its study of this question, the War College Division has given consideration to the desirability of proposing a smaller infantry division than the typical division authorized in the National Defense Act of June 3, 1916. This will be necessary if greater experience in the manœuvre of larger units should justify the adoption of an army corps organization similar to that in vogue in Europe. It is quite evident that our present typical division is too large to form a component of an army corps constructed on the principle of maximum economy of road space. On the other hand, having in view the character of average American roads, it is possible that greater experience will confirm the wisdom of retaining large divisions as components of field armies without forming an intermediate unit like the European army corps. As the National Defense Act authorizes the President to modify the number of smaller units in brigades, divisions, and army corps, and as the auxiliaries recommended for the 16 divisions under this plan can be adapted to a modified divisional organization, either in the training force or the reserves, it is not considered desirable to recommend legislative changes relating to

FIGURE 2.


Training division—
(Comprises the training cadres for the units of 1 F. S. R. division with proportion of auxiliaries required for army corps). Trains 31,250 recruits per year for three reserve divisions.
1st Division, 1st Reserve
2d Division, 1st Reserve
3d Division, 1st Reserve
1st Reserve
Trained Reservists
End of 1st year 9,375
" " 2d " 17,813
" " 3d " 25,407
" " 4th " 32,241
Same as 1st division 1st Reserve
Same as 1st division 1st Reserve
1st Division, 2d Reserve
2d Division, 2d Reserve
3d Division, 2d Reserve
2d Reserve
Trained Reservists
End of 5th year 6,151
" " 6th " 11,688
" " 7th " 16,670
" " 8th " 21,155
" " 9th " 25,191
" " 10th " 28,824
" " 11th " 32,094
Same as 1st division, 2d Reserve
Same as 1st division, 2d Reserve

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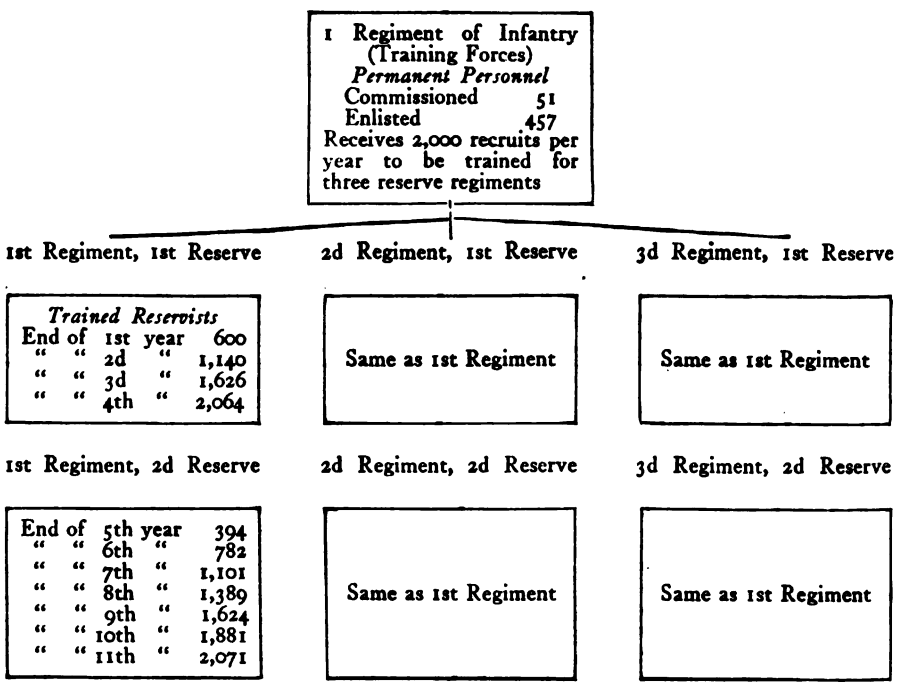
organization until after we have had greater experience in the actual handling of larger units. In this connection it should be remembered that our present arrangement of three brigades to the division and three regiments to the brigade has decided tactical advantages.

5. *Relation Between Smaller Units in the Training Forces and the First and Second Reserves.* The general relation shown between training divisions and reserve divisions in Figure 2, on page 185, also governs smaller tactical units. Wherever practicable a training brigade will furnish reservists to three first reserve brigades, a training regiment to three first reserve regiments, and a training battalion to three first reserve battalions. This general relation is indicated in Figure 3, below, which shows the relation between the infantry regiments of the training forces and the corresponding infantry regiments of the first and second reserves.

Figure 3 shows the organization of a training regiment of infantry. Its permanent personnel is seen to comprise 51 commissioned officers and 457 permanent enlisted men. It receives about 2,000 recruits per year to be trained for the reserve. It is seen further that at the end of the first year each regiment of the first reserve will contain 600 trained reservists, and that at the end of the fourth year the number of trained reservists in each first reserve regiment will be in excess of the number required for mobilization. It is also seen that at the end of the eleventh year the second reserve regiments will be completely filled with trained personnel. During war the training regiment will continue the training of recruits

FIGURE 3.


1 Regiment of Infantry (Training Forces)
Permanent Personnel
Commissioned 51
Enlisted 457
Receives 2,000 recruits per year to be trained for three reserve regiments
1st Regiment, 1st Reserve
2d Regiment, 1st Reserve
3d Regiment, 1st Reserve
Trained Reservists
End of 1st year 600
" " 2d " 1,140
" " 3d " 1,626
" " 4th " 2,064
Same as 1st Regiment
Same as 1st Regiment
1st Regiment, 2d Reserve
2d Regiment, 2d Reserve
3d Regiment, 2d Reserve
End of 5th year 394
" " 6th " 782
" " 7th " 1,101
" " 8th " 1,389
" " 9th " 1,624
" " 10th " 1,881
" " 11th " 2,071
Same as 1st Regiment
Same as 1st Regiment

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and will furnish a depot to supply trained men to replace casualties at the front.

6. *The Permanent Personnel Required for Training Purposes in the Different Arms.* Figure 3 shows that each training regiment of infantry should have about 457 permanent enlisted men, in order to furnish an effective training cadre for the 2,000 infantry reservists. Table 1, below, shows this relation in a general way for all arms.

TABLE I.

	PERMANENT COMMISSIONED	PERMANENT ENLISTED	MINIMUM NUMBER OF RECRUITS	NUMBER OF UNITS MAINTAINED IN 1ST RESERVE
Regiment of Infantry	51	457	1,970	3 regiments
Regiment of Cavalry	52	414	1,487	3 regiments
Regiment of Field Artillery	41	414	1,267	3 regiments
Gun Company, Coast Artillery	3	27	100	.....
Regiment of Engineers	33	396	1,162	3 regiments
Field Battalion, Signal Corps	13	77	239	3 battalions
Aero Squadron	18	68	150	3 squadrons
Balloon Company	15	68	150	.....
Field Hospital	6	16	75	3 field hospitals
Ambulance Company	5	32	150	3 ambulance companies

The table above shows the number of permanent commissioned officers and enlisted men that are believed to be necessary for forming efficient training cadres in the several specified organizations.

It is possible that experience may justify a reduction of this training personnel after the system is in operation. But it is not believed that the proposed numbers can safely be reduced at the start, for upon the inauguration of the system a considerable portion of the training personnel will be officers and enlisted men of limited training.

At the start a considerable number of the commissioned personnel of the training units will be "temporary" officers. After the first annual class has been trained, "temporary" officers will be selected from those trained reservists who are willing to serve for a period of at least one year in the Officer Corps of training units. From these officers a limited number will be appointed into the permanent establishment after a year of service, and the bulk of them will pass to the reserve. This system will be of such intrinsic value to the first and second reserves that it may be desirable to continue it as a permanent feature of the system. In this event the total number of permanent officers might be reduced.

An enlistment period of one year in training units is recommended. This feature is considered necessary in order to recruit the training cadres promptly upon the inauguration of the system. This may also become a desirable permanent feature of the system, as it will result in further training for a considerable number of reservists. Reservists who have served an additional year with training units either as temporary officers or enlisted men will be of great value as officers and non-commissioned officers in the organized reserve.

7. *Number of Units Required for the First Reserve Army and the Corresponding Number Required for the Training Forces.* In order to give the first reserve army its proper organization of 48 infantry divisions with 6 cavalry divisions and other auxiliaries required for forming higher commands, the first reserve army should comprise

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the tactical units given in the first column of Table 2, below. In order to train the required number of units for the first reserves, it will be necessary for the training army to comprise the training cadres for the tactical units shown in the second column of the same table.

and a sufficient nucleus for forming train units in war. The estimates include one truck company for each training division.

. . . . . .

9. *General Scheme of Organization.* As soon as the military organization proposed herein is authorized by law,

TABLE II.

	NUMBER OF UNITS REQUIRED FOR FIRST RESERVE	NUMBER OF CADRES OF UNITS REQUIRED FOR TRAINING FORCES
Regiments of Infantry	432	144
Regiments of Cavalry	96	32
Regiments of Light Artillery	144	48
Regiments of Heavy Artillery	48	16
Regiments of Horse Artillery	6	2
Regiments of Engineers	48	16
Mounted Battalions of Engineers	6	2
Field Signal Battalions	48	16
Field Signal Battalions, Mounted	6	2
Aero Squadrons	78	26
Balloon Companies	24	8
Ambulance Companies	240	80
Field Hospitals	240	80
Field Bakeries	66	22

It will be noted in the examination of Table 2 that training units are not provided for ammunition and supply trains. In this plan and in the estimates based upon it, the field trains of organizations only are provided, as it is not considered desirable to give the ammunition and supply train personnel one year's training as such. It is considered better to train the necessary personnel as an over-strength of tactical organizations and to form the divisional and corps trains either from teamsters and chauffeurs in civil life or from reservists who have been drawn into such avocations after completing their military training, or from both these sources.

The training of personnel for the engineer train is provided by increased personnel in the training regiments of engineers.

The field trains of regiments will give a sufficient amount of transportation for the training forces in peace

the country should be divided into 48 reserve divisional areas. Each three of these reserve areas should comprise one divisional training area, and within each such training area a training division should be formed. In addition to the tactical units required for the infantry division, each such divisional training area should contain a portion of the auxiliary units required for the formation of higher commands.

The distribution of these auxiliaries cannot be uniform. For example, divisional areas on the seaboard will include certain units of the coast artillery, in addition to mobile army auxiliaries. Certain divisional areas located in or near great centres of population will probably not be suitable for the training of cavalry and other mounted troops. In such divisional areas, therefore, certain units should not be organized, and an increased number of them should be

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organized in adjoining rural areas. Each divisional area should, so far as practicable, contain its own divisional cavalry, but the cavalry for cavalry divisions should be distributed, after due consideration, in regions most suitable for obtaining and training cavalry personnel. In practice, therefore, while each divisional area should normally contain an infantry division and a proportionate share of auxiliaries, there will be some variation in the total number of troops to be raised in each such area and a corresponding difference in military population. The division of the country into divisional areas should be prescribed by the War Department after a careful survey of all the conditions of the problem. After the divisional areas are formed and the composition of training forces therein determined, the further subdivision of divisional areas should be regarded as a local problem to be worked out in each case by the commander of the divisional training area.

10. *The Functions and Duties of Commanders of Divisional Training Areas.* After the 16 training areas are formed and division commanders assigned, each such commander should have the fullest power to control all the military administration within the limits of his area. It must be quite obvious that, with forces as large as we are now considering, centralized administration in the War Department would necessarily break down. It should be understood that the commander of the divisional area is to organize and administer all the military resources within the territory assigned to him, and that he should have all necessary powers to perform these duties. The War Department should give him a general policy embodied in proper orders and regulations. It should give him his proportionate share of available personnel and his proper allotment of funds, and the details of solving the problem should be left to him.

A considerable interval must elapse between the passage of a law authorizing universal service and the actual beginning of the system of universal training. During this interval the preliminary organization must be effected and the commander of the divisional area should use this interval for the recruitment and organization of the permanent training personnel and for the location and preliminary organization of reserve units. When it is considered that 51,000 reserve officers will be required for the first reserve alone, it must be recognized that steps to form a corps of such officers should be undertaken at once.

11. *Subdivisions of the Divisional Training Area.* So far as practicable the tactical units of the first reserve army should be localized. The divisional training area should be subdivided into three reserve divisional areas and within each of these areas it should be understood that a reserve division is to be formed in war. Similarly, each reserve divisional area should be divided into three infantry brigade areas and each reserve brigade area should be divided into three regimental areas. It may not be practicable always to raise definite units in definite areas, but this should always be done whenever conditions permit. The boundaries of the different subdivisions should be defined by the commander of the divisional training area and, in order to meet changes in population and changes in distribution, he should have the power to change such boundaries when necessary or to transfer surplus reservists in one area to areas in which a deficiency may occur.

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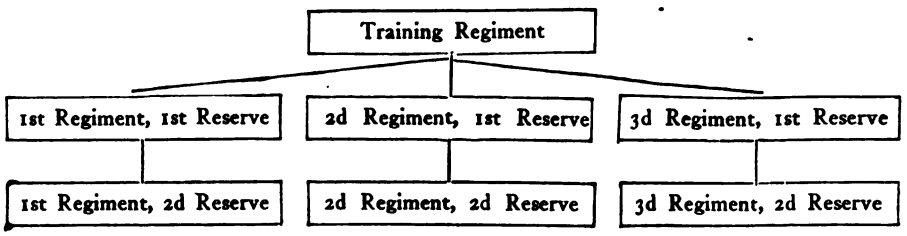
IV. THE ORGANIZATION OF THE RESERVES, ETC.

1. *Arrangements for Peace Administration and Mobilization in Peace and War.* The relation between a training regiment and the corresponding regiments of the reserve are shown in Figure 4, below:

FIGURE 4



It is to be understood that these reserve regiments are assigned to adjacent regimental areas, and that the training regiment is located within or near the area occupied by the reserve brigade.

The training regiment draws its recruits from all three regimental reserve areas, and after eleven months' training returns them to their reserve regiments as trained reservists.

If these three regiments are to be promptly mobilized in war, it will be necessary in time of peace to provide some system of administration that will look out for the equipment and mobilization plans of each regiment, and also for the training and qualification of its officer personnel. It is believed that the simplest and most effective means of accomplishing these objects is to provide that upon mobilization the colonel of the training regiment is to become the commander of the corresponding reserve brigade, and that the headquarters of the training regiment will also be the peace headquarters of the entire reserve brigade. Upon mobilization this colonel will take command of the reserve brigade and will take with him from the training regiment a junior officer to act as brigade adjutant. Similarly, one of the field officers of the training regiment will go to each of the three first-line reserve regiments as colonel, and each such field officer will take with him a trained officer as adjutant and supply officer. By this arrangement we are able to provide a trained commander and staff for each regiment of the reserves, and the headquarters of the training regiment becomes the headquarters for the peace administration of the corresponding reserve units. Each officer of the training regiment designated as a reserve colonel should have full charge of all plans for the equipment, training, and mobilization of his reserve regiment and should have general supervision of its reserve officers and their qualifications for promotion. It is believed that the efficient performance of these functions requires the constant attention of an experienced officer of the permanent personnel and that these duties cannot be performed by a citizen reserve officer who ordinarily is actively engaged in civil pursuits. Similar arrangements should also be made for providing reserve units of the other arms with experienced commanders from the permanent personnel. Higher reserve units such as divisions and army corps will draw trained

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staffs as well as commanders from the permanent personnel.

Upon mobilization for war or for manœuvres it thus appears that a considerable number of trained officers will pass from the training unit to reserve units. Therefore, in order to maintain the efficiency of the training establishment, which must keep up its function of training recruits in time of war, the plan provides that whenever a given number of officers are transferred from the training units to reserve units they are to be replaced by a corresponding number of reserve officers. Under this arrangement, without any depletion of the strength of the training personnel we are able to provide for an efficient supervision of all the reserve organizations. As before stated, it is believed that the efficiency of the system depends upon having each reserve regiment and higher unit under the supervision of a regular officer, who will be definitely responsible for the maintenance of its equipment, the provision of its mobilization plans, and the supervision of the training and qualification of its officer personnel. Under this system the training regiment not only trains reservists and reserve officers, but also keeps in touch with the personnel of the reserve unit in time of peace. The officers of the permanent establishment thus assigned to reserve regiments will have an especially important duty in keeping track of reservists who change their residence from one reserve area to another.

As the maintenance of the reserve organization in time of peace and its preparedness for prompt mobilization depend upon the direct supervision of an experienced officer connected with the training regiment, it is believed that all reserve commissions higher than that of lieutenant colonel should, in time of peace, be held by regular officers. This will assure a qualified trained officer for each regimental and higher command upon mobilization and during the initial strategic deployment for war, but after military operations once begin, and after reserve officers have been tested in active service, the avenue of promotion should be open to reserve officers and to regular officers alike. During war, officers should be free to rise to the highest rank consistent with their capacity as determined in active service.

In a normal divisional training area there will ultimately be three first reserve divisions and three second reserve divisions with the necessary auxiliary units to form a complete army corps of three divisions in the first reserve and a corresponding army corps in the second reserve. The total permanent personnel of such a training division will be 972 commissioned officers and about 7,500 enlisted men, and the total strength of each of the two reserve army corps upon mobilization will be 3,058 officers and about 93,000 enlisted men. If the commanders of separate battalions and higher units and the staffs of brigades and higher units in the reserves are drawn from the permanent personnel, it will be necessary for about 150 officers to pass from the training division to each of the two reserve army corps, and for at least 300 reserve officers to replace them in the training units. But it will be both practicable and desirable to employ an even greater number of regular officers in the reserve organizations, and this can always be done by the same arrangement of transferring a corresponding number of reserve officers to the training units. If upon mobilization any of the reserve units below the regiment are not provided

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with citizen reserve officers qualified to command them, they should be commanded by officers from the permanent establishment under reserve commission, and for this purpose the number of available professional officers can be increased by giving reserve appointments to qualified non-commissioned officers in the permanent personnel. There will also be an important place for enlisted men of the permanent personnel to serve as non-commissioned officers of the reserve, especially in positions requiring more administrative experience than can generally be expected of reserve non-commissioned officers appointed from civil life. The capacity of the training units to furnish experienced officers and non-commissioned officers to the reserve army is limited only by the requirement that the training units must continue their function of training recruits during the progress of war, and the actual numbers transferred will depend upon the requirements of the situation. The commander of the divisional training area will be responsible for the preparedness of the first and second reserve army corps, which may ultimately be mobilized in his area, and he should be guided by the general principle that he is to draw upon the permanent personnel for higher commanders and staffs and that he is to employ other members of the permanent personnel to perform all functions that cannot be efficiently performed by citizen reservists at the beginning of military operations.

After the system is in full operation it is believed that at least 75 per cent. of the experienced personnel of the training division can be passed to the reserve war army upon mobilization without seriously impairing the efficiency of the training service. After operations begin still more of the experienced personnel can be sent to the front as their duties with the training establishment are taken over by convalescent officers and enlisted men.

It should be noted that the proposed organization of reserve divisions and army corps involves no increased expense in time of peace.

2. *Repeating Seasons.* In the plan under consideration, it is proposed that each reservist should serve eleven months with the training forces, that thereafter he should be passed to the first reserve; and that at the end of his first and second years in the reserve he should be required to attend a short repeating course of about two weeks. It is not considered that these repeating seasons are solely necessary for the further individual training of the soldier, but it is believed that they are essential to the training of the reserve units as organized teams. By means of these repeating seasons it will be possible actually to assemble reserve organizations long enough to test their equipment, their mobilization arrangements, and the capacity of their officers and non-commissioned officers and their qualifications for promotion.

Without these repeating seasons the reserve is merely a paper organization with no peace test of its efficiency as an organized team. With these repeating seasons, even though short, it will be possible each year actually to mobilize each regiment at substantially war strength. Even if regiments are not assembled in larger units, this annual assembly has very great advantages, and if from time to time the regiments are brought together for brigade and divisional manœuvres an opportunity will be given for higher commanders actually to demonstrate their capacity or incapacity to handle

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their war commands. The cost of these annual mobilizations of reserve units is very small compared with the total cost of the training, as will be seen from the following figures:

3. *Cost of One Regiment of Infantry in the Training Forces:*

Cost of 51 officers, at $2,400 . .	$122,400
Cost of 457 permanent personnel enlisted, at $600	274,200
Cost of 2,000 recruits for 11 months	800,000
Total cost of training regiment one year	$1,196,600

As indicated by the foregoing diagrams, this training regiment is really nothing but the training nucleus for a reserve brigade, and if this reserve brigade is to have any peace practice, it will be necessary for 3,420 reservists in their first and second years of reserve service to attend a repeating season for two weeks. During this period the class of recruits just trained, added to the 3,420 repeating reservists, will give us substantially a war-strength brigade. The additional cost will simply be the additional cost of maintaining 3,420 reservists for two weeks, which at $20 per reservist will be $68,400 or about 5½ per cent. of the annual cost of the training regiment. It is believed that this cost is very small compared with the advantages to be derived from the annual assembly.

In order to secure the advantages of this annual test of the reserve organization, it will be necessary for reservists to repeat for two weeks in the first year of reserve service and again in the second year. This completes all compulsory service in time of peace in the reserve, but it is assumed that non-commissioned officers and officers who aspire for promotion will be required to attend such additional repeating seasons as may be necessary in order to test their capacity. This is an additional burden, but it is imposed only on those who have an aptitude for military service and who volunteer in consideration of opportunity for increased rank and for further promotion.

4. *Successive Steps in the Organization of the Reserve.* In order to make the reserve organization more intelligible, the successive steps in the formation of the reserve are summarized as follows:

(a) Immediately on the passage of the Act the divisional training areas are formed and divisional commanders are assigned thereto with such commissioned and enlisted personnel as may be available.

(b) Upon arriving in his divisional training area, the divisional commander divides it into three reserve areas and, so far as conditions permit, subdivides these into brigade and regimental districts.

(c) As provided in Section 42 of the proposed law, the commander of the divisional training area now invites all citizens of former military training to offer themselves for appointment as reserve officers.

(d) Examining boards for reserve officers are appointed as provided in Section 39 of the proposed law.

(e) Competent officers of the permanent establishment are designated as commanders of reserve divisions, brigades, and regiments, and other professional officers are designated to undertake the organization of auxiliary units.

(f) The examinations of reserve officers are completed and successful candidates are appointed and assigned to reserve units to be formed near their homes.

(g) Qualified non-commissioned officers are enrolled and assigned to units.

Without reference to its relation to any plan of universal service, it is

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believed that the above preliminary organization is a most important step toward preparedness. Even if it should be necessary to organize an army of untrained men, a preliminary localization of units and the assignment of qualified reserve officers and non-commissioned officers thereto would be of great value.

All this is done before the beginning of the first training year, and such vacancies in the commissioned and non-commissioned personnel as may exist in reserve organizations will be filled as soon as the first class has finished its year of training. Two weeks before the end of the first training season, each newly organized reserve infantry regiment will receive 600 trained reservists. The manœuvre period this year will probably be devoted almost exclusively to the completion of the reserve organization. This reserve regiment will not be fit for active service until after it absorbs a large number of trained men, but it now has a complete training cadre and is prepared if necessary to train raw men with considerable facility. At the end of the second training season, each of these reserve infantry regiments will receive another 600 trained reservists and will now have more than 1,100 in all. At the end of the third training season the regiment will contain 1,626 trained reservists, and at the end of the fourth year it will contain 2,064 trained reservists.

5. *Future Source of Reserve Officers.* Upon the initial organization of reserve units it will be necessary to enroll therein as many officers and enlisted men of previous military training as it will be practicable to draw from civil life, but after this organization is once completed and the training of annual contingents has begun, reserve officers will normally be recruited from men who have had the prescribed eleven months of military training and from graduates of the Reserve Officers' Training Corps. During their service with the training unit their capacity and aptitude will be noted and certain men will be designated as suitable for further promotion as vacancies occur. These will be appointed non-commissioned officers, and if efficient as such will ultimately be appointed officers.

The Reserve Officers' Training Corps as provided in the National Defense Act should be continued in its present form until all members now enrolled have completed their prescribed training for appointment as reserve officers. After the system of universal training has gone into operation, the regulations for the Reserve Officers' Training Corps will undergo modifications in so far as they relate to young men who have completed the prescribed eleven months of training before entering college. For these men it will not be necessary to provide formal military drills in school.

6. *Mobilization During the Transition Period.* It has been indicated above that there will not be enough trained reservists to fill the reserve organization until after the end of the fourth training season, but as an emergency might come before the conclusion of that period it is important to consider whether the proposed plan of organization will meet requirements during the transition period. Within six months after the passage of the Act the skeleton of the reserve organization should be complete and all available reserve officers and non-commissioned officers in the country should be examined, appointed, and assigned to reserve organizations. This in itself is an important step in preparedness, as each reserve officer will then know definitely what would be expected of him in the event of

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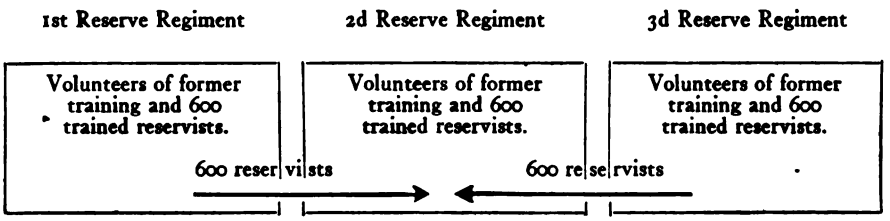
sudden emergency and will have his duties connected up with a particular unit of a particular arm to be organized in a particular region. At the end of the first training season, each reserve regiment would receive a number of reservists equal to about 30 per cent. of its combatant war strength. Should an emergency occur this year, and time permitted, each of these regiments would be filled with raw men and would have a competent training force for that purpose. If a certain number of regiments should be required on short notice, it would be possible to transfer trained reservists in such a manner as to form one regiment of trained combatants in each brigade district. At the end of the second training season, each reserve regiment would have considerably more than half of its war strength in trained reservists and would have to absorb less than 50 per cent. of raw men in the lower grades. In this way, it would be possible to mobilize immediately a trained regiment in each brigade district and still have a considerable training nucleus for the other two regiments. At the end of the third year, each reserve regiment would be but little short of war strength and would be able to fill all purely combatant grades with trained reservists, absorbing only enough raw men to complete its regimental train. At the end of the fourth year, each regiment of the reserve will be over strength and thereafter would be prepared for complete mobilization.

Figure 5, below, shows the arrangements for mobilization of a regiment of infantry in each reserve brigade should an emergency occur during the year after the first class has passed into the reserve.

Figure 5 shows that by transfers of trained reservists from the 1st and 3d regiments the number of trained reservists in the 2d regiment is increased to 1,800:

FIGURE 5


1st Reserve Regiment
2d Reserve Regiment
3d Reserve Regiment
Volunteers of former training and 600 trained reservists.
Volunteers of former training and 600 trained reservists.
Volunteers of former training and 600 trained reservists.
600 reservists
600 reservists

(1,800 Trained Reservists)

Figure 6, on page 196, shows the emergency arrangements for the year after the 2d class has passed into the reserve.

By the transfer of trained reservists, indicated in Figure 6, the 2d regiment is given its full maximum enlisted strength in trained reservists, with 725 trained reservists remaining as a nucleus in each of the other regiments. Or any two of the regiments of the brigade may be given a total strength of 1,710 trained reservists by receiving all the trained reservists from the third regiment, as shown in Figure 7, on page 196.

7. *The Training Season.* It is proposed that the training season should begin November 1st and extend to September 30th. During the winter months, the course should be largely restricted to the individual training of the soldier and his physical development. This course should include the school of the soldier, physical drill, care of equipment and clothing, gallery

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practice, and bayonet fighting for the infantry and the care of animals for the mounted services. During this period the work should be in the open air as much as possible, but in the northern portions of the country it will be necessary to provide enough shelter to continue instructions at all times. This is largely a question of a suitable curriculum, so arranged as to provide winter instruction in those subjects in the soldier's education which can be taught as well indoors as out of doors. After spring opens, the work should be almost exclusively in the open air. After the winter's course in physical development and the school of the individual soldier, the school of the company, battery, and troop should progress rapidly and should be followed by the school of the battalion and squadron and ultimately by the school of the regiment and brigade. The work should be made as practical as possible, and each individual and each unit should be fully trained for every possible military situation. The season of training should culminate with the annual manœuvre period extending from September 15th to September 30th. During this fifteen-day interval, the newly trained recruits would be absorbed in their reserve units and the period would be devoted primarily to testing the efficiency and preparedness of the reserve. The interval from October 1st to November 1st would be occupied in preparing for the next season's training and in necessary repairs of equipment and plant.

It is very important that the courses of instruction suitable for compulsory military service should be most carefully studied before the plan is inaugurated. Each training unit should begin its first season with a curriculum as sound and as well settled as those of the best schools. The preparation of these curricula is a task of very great importance and should engage the best talent in the Army for a considerable period before any system of military training is undertaken.

8. *Transfers to the Southern Part of the United States for Training in Winter.* The committee has been

FIGURE 6

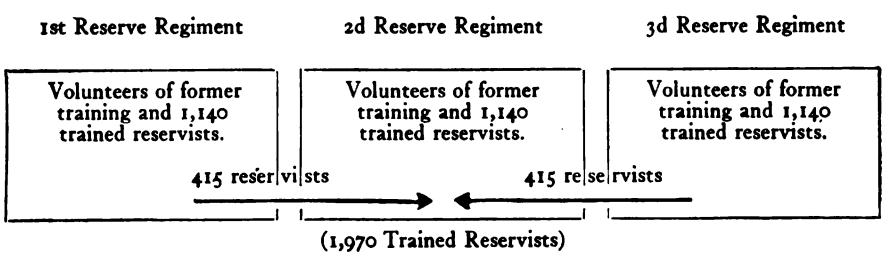
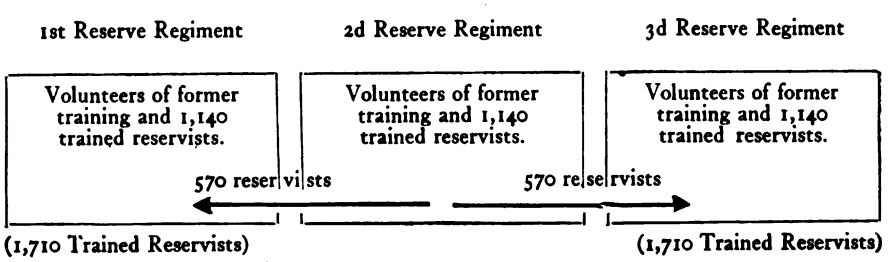

1st Reserve Regiment
2d Reserve Regiment
3d Reserve Regiment
Volunteers of former training and 1,140 trained reservists.
Volunteers of former training and 1,140 trained reservists.
Volunteers of former training and 1,140 trained reservists.
415 reservists
415 reservists
(1,970 Trained Reservists)

FIGURE 7


1st Reserve Regiment
2d Reserve Regiment
3d Reserve Regiment
Volunteers of former training and 1,140 trained reservists.
Volunteers of former training and 1,140 trained reservists.
Volunteers of former training and 1,140 trained reservists.
570 reservists
570 reservists
(1,710 Trained Reservists)
(1,710 Trained Reservists)

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instructed to consider the advisability of transferring recruits from the northern part of the United States to the South, in order to avoid the winter work under shelter that would be required in the northern climate. It is the opinion of the Division that this transfer of personnel is not necessary for purposes of instruction and that a considerable part of the necessary individual training can be conducted in the winter even in the North. But when this question is considered in connection with the organization and training of the first reserve, it is believed that such transfers are subject to very serious objection. In developing this plan, it has become very evident that in time of peace the training personnel should be in close contact with the reserves and that the higher officers of the training personnel should be closely identified with the reserve organizations they are to accompany to war. If the training personnel should be in the South and the reserves in the North, it would be very difficult to maintain this relation and very difficult to make satisfactory arrangements looking toward the mobilization of the first reserve. Furthermore, the training of reserve officers and the manœuvre training of reserve units should be based upon their probable war missions and therefore the training, even in the winter, should be in the region which would probably be the initial theatre of war of such reserve units. The reserve units organized in New England and New York, in the event of a war with a European Power, will be called upon in all probability at the outbreak of hostilities to occupy positions on the coast adjacent to their homes, and their peace training and instructions should be of such a nature as to familiarize them with this war mission. In a similar way, the reserve divisions located along the Great Lakes should be primarily responsible for the defense of our northern frontier at the outbreak of hostilities, and it is believed that the correct organization of these reserve units and their preparation for mobilization would be seriously affected if each contingent of reservists and the corresponding training personnel should be detached from the proper reserve areas and transferred for a portion of the year to some position in the South. As troops may have to operate in the winter in actual war, their training should include winter operations. While troops at a northern station may have some days when outdoor work is impossible, such work is everywhere practicable for a considerable portion of the winter season.

9. *Pay of Reservists.* The pay of reservists during their eleven months of training is assumed to be one third of the pay of a private, or $5 per month. This sum of money is not proposed as compensation or pay in the ordinary sense, but is merely an allowance to meet necessary personal expenses. The principle of universal military training and service is inconsistent with pay as such, but in order to put all reservists on an equal footing as regards meeting necessary personal expenses it is considered that all young men undergoing training, rich and poor alike, should receive a small monthly allowance. During repeating seasons, it is proposed to pay reservists and reserve officers and non-commissioned officers one third of the pay of their respective grades. In time of war, it is proposed to pay reservists of all grades the full pay and allowances authorized by law for corresponding grades of the permanent personnel.

10. *Oversea Service.* The organizations assigned to duty in the oversea

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forces have very important special missions, and it is very desirable that officers assigned to such duties should specialize therein. With the very large increase in the number of officers proposed in this plan, it is believed that there will be a considerable number who will prefer oversea service and that such officers will be most suitable for that duty. In Section 34 of the proposed draft of legislation it is proposed, as far as practicable, to make details for oversea service from those officers who volunteer for such duty, and not to apply the roster unless there should be an insufficient number of volunteers. It is also proposed to make the tour of oversea service three years, with the privilege of extending the period with the officer's consent. It is also proposed to give a 10 per cent. increase of pay to officers and a 20 per cent. increase of pay to enlisted men while on oversea service. This will involve some increase in the pay of the army, but as it will tend to prolong the tour of service abroad, the increase in cost for pay will be offset by a decrease in cost of transportation. It is also believed that, if the oversea garrisons are composed very largely of officers and men who elect such duty and who remain on such duty for considerable periods, the efficiency of the oversea garrisons will be very greatly increased.

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NATIONAL SERVICE

TRAINING CAMPS SUPPLEMENT

April 1917

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(Address all communications to The Editor of Supplement, Military Training Publishing Corporation, 19 West 44th Street, New York City.)

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ENROLLMENT BLANK

I, _____ (Give name, initial, and surname), a _____ (Rank), of _____ (Section) in the Officers' Reserve Corps, or an attendant in the 191__ _____ (Month) _____ (No.) _____ (Street) _____ (Location) Camp, or an applicant _____ (City and State) for attendance in a 1917 training Camp, (Rule out words not applicable) desire to enroll for the Correspondence Course to be conducted by the Headquarters Eastern Department, U. S. Army, Governors Island, N.Y., and agree to follow conscientiously the course as prescribed, time and circumstances permitting.

(Signature)* _____ (Use pen and ink)

Date_____, 1917

(Typewrite or print this blank, with the exception of signature)

Mail to Officer in Charge, Correspondence Course, Governors Island, New York

[*See "The Correspondence Course," page 49*]

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NATIONAL SERVICE

TRAINING CAMPS SUPPLEMENT

April, 1917

TRAINING CAMPS NEWS

BY THE time this number is out the recruiting campaign for the 1917 Training Camps will be fairly launched.

The Military Training Camps Association, organized but little more than a year ago with a membership of 4,000, now has more than 18,000 members, with Divisions and Branches in almost every state of the Union. It is prepared to give that active help which is relied upon by the War Department.

The organizing genius and driving power of the new Chairman of the Central Department Committee, Mr. Peirce Anderson, of Chicago, backed by an active committee and ably assisted by the new Executive Secretary, Mr. Wharton Clay, have laid the foundations for a successful campaign in the Middle West. Divisional Headquarters have been established in each state of the Central Department, and these in turn have organized local branches and recruiting committees.

The Western Department has recently been organized along the same lines. Mr. Benjamin H. Dibblee, of San Francisco, is devoting his whole time to this work. He will be assisted by Mr. Silsby M. Spalding, of Los Angeles, who has moved to San Francisco to be the Executive Secretary. The movement will have the active support of Mr. George A. Batchelder, of Santa Barbara, Mr. Hamilton F. Corbett, of. Portland, and all those who did such yeoman service for the camps on the Pacific Coast last year.

In the Eastern Department the machinery of the several divisions, branches, and local committees and their relations to the Departmental Headquarters and to each other have been carefully worked out by Capt. Arthur F. Cosby, the Executive Secretary for this Department.

In the Southern Department, Major H. L. Laubach, U. S. A., the Officer in Charge, has already established recruiting offices in five cities.

Large orders have been placed by the various Departmental Headquarters for the Government circulars, bulletins, and enrollment blanks. Recruiting literature, posters, moving

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pictures, lantern slides, and other publicity material are in readiness or in course of preparation, and plans for public meetings and other methods of obtaining publicity are being made by the more active committees all over the country.

All this organized effort is certainly most desirable and even essential if a campaign of education is successfully to reach the public. But the real basis of the success of the whole movement is the enthusiasm and willingness to respond of each individual "training camper." It was the response of the 1915 men that brought the 12,000 recruits to Plattsburg last summer. It is on the response of the fourteen thousand 1916 men throughout the country—the willingness of each individual to do something for the cause—that will rest the success or failure of the training camps movement. Let each of us remember that.

At the outset let us impress upon the new men who are enrolling what the so-called "Plattsburg idea" really means. We are *not* trying to build up a volunteer force. This is *not* a movement simply to supply potential reserve officers, though that may be, so to speak, a useful by-product. Let the new recruit understand that the real purpose of this great movement is to forward the cause of universal obligatory military training and equal service for the young men of the United States under exclusive federal control. The federal camps provide an object lesson of the practicability and value of such a system.

The National and Eastern Department Headquarters of the Training Camps Association have moved to 19 West 44th Street, New York City. A branch office is still maintained at 31 Nassau Street. The Army has taken an office adjoining the Association's, which will be devoted solely to the recruiting and administration of the civilian training camps, and will be in charge of a Regular Army Officer

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Training camps in the Western Department have been announced as follows:

Santa Barbara, California, June 1st to June 30th, and July 1st to July 30th.

American Lake, Washington, August 4th to September 2d;

Fort Douglas, Utah, August 4th to September 2d.

The following training camps are announced in the Southern Department:

Austin, Texas, May 4th to June 3d.

Dallas, Texas, June 16th to July 15th.

Las Vegas, New Mexico, July 21st to August 20th.

Alexandria, Louisiana, July 28th to August 27th.

Houston, Texas, September 8th to October 7th.

The Adjutant General of the Army has recently advised the Training Camps Associations that every effort will be made to detail sufficient regular troops to the various training camps, and has expressed the earnest hope that the Association will continue its recruiting efforts.

More than 800 men, nearly all members of the Training Camps Association, have been attending the course of theoretical instruction conducted by Capt. Ralph M. Parker, U.S.A., in New York. The course has been

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meeting since the end of December every Thursday evening from 8 to 10 at the DeWitt Clinton High School. Before each lecture "quizzes" are held by "section leaders" on the subject of the preceding lecture. The men are marked on these, on their attendance, and on written papers and problems given out from time to time.

In spite of the difficulty of covering a wide range of subjects in a very limited space of time, Captain Parker's talent for imparting military instruction to civilians enabled him to present the salient points with remarkable clarity, and also, we hope, to instil into his pupils a desire for further reading and study. His two lectures on topography and military map-making—the *bête noire* of the average layman—were a masterly presentation of an intricate subject.

Captain Parker has been conducting a similar course one night a week in Boston and Philadelphia, each of which has been attended by more than 300 men.

An extremely valuable course in quartermaster's work is being given by Major Lawton, U. S. A., each Thursday night in New York and on Monday and Friday nights in Boston. The attendance in New York is about 250; in Boston, 350.

Major Lewis Sanders, O.R.C., under sanction of the authorities at Governors Island, has been conducting a small course of theoretical instruction in field artillery on the same evenings.

The CORRESPONDENCE COURSE

(Conducted under authority of Headquarters, Eastern Department, U. S. Army. Members of M. T. C. A. of U. S. who are subscribers to NATIONAL SERVICE *desiring to enroll are referred to the Enrollment Blank on the inside front cover.)*

III. NOTES *on* MANUAL *for* COURT MARTIAL

(CONCLUDED)

By CAPTAIN RALPH M. PARKER

(2d U. S. Cavalry)

CLOSED Session.—To avoid disclosing the vote or opinion of a member on any question arising, the court will go into closed session. Closing the court is effected in two ways:

1. The usual method is to cause the judge advocate, the accused, his counsel, the witness, the reporter, and the interpreter, if any, and all spectators to withdraw from the courtroom, leaving only the members of the court in the room.

2. It may be more convenient, however, and is permissible for the court proper, to withdraw to another room.

It is not necessary to close the court in every case requiring the action of the court. Where action may be had by unanimous consent without disclosing the vote or opinion of a member the president may announce that,

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without objection, so-and-so—For example, should the judge advocate request a recess the president may announce that, "If there is no objection the court will take a recess"—

Sitting With Closed Doors.—While it is customary for courts-martial proceedings to be conducted with doors open to the public, it is nevertheless authorized in the discretion of the court to close the doors to the public, when the case being tried is of a scandalous nature.

Change of Membership.—While it is undesirable to change the membership of a court during a trial, the appointing authority has power to relieve members and to add new members to the court at any time when necessary.

The promotion of a member does not effect his status with the court, except that he will sit according to his new rank. The rule is that no member who has been absent during the taking of evidence in a case shall take part in the trial, but non-observance of this rule shall not invalidate the proceedings, if no objection has been made to his sitting. The rule will be complied with when practicable. When a member is permitted to resume his seat after an absence during which important testimony has been taken, all proceedings and evidence presented during his absence shall be read to him in open court and the record should so indicate.

THE JUDGE ADVOCATE

Selection.—The judge advocate should be carefully selected for his efficiency in that capacity. Where it can be avoided, a judge advocate will not be selected unless he has had experience as an assistant judge advocate.

General Duties.—The judge advocate of courts-martial shall prosecute in the name of the United States and shall, under the supervision of the court, prepare the record of its proceedings. He will attend to the following matters:

(a) Arrange for a suitable room.

(b) Procure and arrange furniture, stationery, etc.

(c) Summon witnesses and make preliminary examinations of them.

(d) Execute the orders of the court.

(e) Read the orders affecting the personnel of the court.

(f) Administer oath to members, reporter, interpreter, and all witnesses.

(g) Arraign the accused.

(h) Examine witnesses in court.

(i) Keep, or superintend the keeping of, the record.

(j) Sign each day's proceedings.

(k) Notify members of subsequent meetings.

(l) Prepare record and present it to president for signature.

(m) Sign record and forward to reviewing authority.

(n) Prepare vouchers for payment of reporter, interpreter, and witnesses.

Authentication of Record.—The record is authenticated by the signature of the president and the signature of the judge advocate. If, on account of death or other cause, the judge advocate cannot sign the record, it will be signed by the assistant judge advocate, or, if there be none, by one other member of the court.

Duty of Judge Advocate Toward the Accused.—Should the accused not be represented by counsel, the judge advocate will from time to time advise him of his legal rights. He should:

(a) Acquaint the prisoner with the accusations against him.

(b) Inform him of right to counsel.

(c) Inform him of his right to testify in his own behalf.

(d) Inform him of his right to a copy of the charges.

While he may ask a prisoner how he intends to plead, he must not try to induce him to plead guilty by in-

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timating that, if he does so, his sentence will be lighter. If the accused intends to plead guilty, the judge advocate should inform him of his right to introduce evidence in explanation of his offense, and should assist him in securing it. During the trial he will see that the accused has every right to which he is entitled. He will assist the accused in his defense and endeavor to bring out the facts in the case.

Examination of Charges.—The judge advocate will carefully examine the charges and report to the convening authority any irregularities which appear to be existing. He will himself correct slight errors, but will not without authority of the convening officer make any substantial changes in the charges or specifications.

Truth to Be Presented.—The judge advocate will do his best to present the whole truth in the matter in question. He will not distort or suppress facts and will oppose any effort to do so.

As Legal Adviser of the Court.—The judge advocate should respectfully call the attention of the court to apparent irregularities in its action or proceedings and will give legal advice only when asked for it by the court. In case the accused pleads guilty, he will, when necessary, invite the attention of the president of the court to the fact that the effect of such a plea must be explained to the accused.

Conduct of the Case.—The judge advocate should be left free to conduct the case as he sees fit. The court, however, is responsible for the thorough investigation of the case and need not content itself with the evidence presented by the prosecution or defense. It is proper for the court as a body, or for any member, to ask questions of a witness. Such questions, however, are not asked until the prosecution and defense have completed their questioning of the witness. The court may direct the judge advocate to recall any witness at any time, or to take any action whereby the facts in the case may be more clearly presented.

The Judge Advocate Not to Be Challenged.—The accused has no right to challenge the judge advocate. In case of interest in the case, or personal hostility to the accused, the judge advocate should apply to be relieved from duty as such in the case.

Weekly Reports.—The judge advocate of a general court-martial will report, through the president of the court and commanding officer of the post, to the appointing authority on Saturday of each week a list of charges on hand, with the date of receipt of each, and if any case has been in his possession for one week or more, without trial, an explanation will be rendered.

Detail of Orderlies, etc.—The commanding officer will detail, when necessary, suitable soldiers or clerks or orderlies to assist the judge advocate.

ASSISTANT JUDGE ADVOCATE

Appointment.—The authority appointing a general court-martial shall appoint one or more assistant judge advocates, when necessary. The assistant shall be competent to perform any duty devolving by law, regulation, or custom upon a judge advocate.

It is usual for the assistant judge advocate to perform routine duties such as the preparation of the court room, notification of members, summoning of witnesses, etc., leaving the conduct of the case to the judge advocate.

COUNSEL

Appointment.—The accused has the right to be represented by counsel. Civilian counsel will not be provided at government expense. Should the

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accused request the appointment of an officer stationed where the court sits and the officer be not a member of the court, he will be detailed as counsel by the commanding officer, if practicable. Should the officer requested be not available to the commanding officer, the accused may appeal to the appointing authority, whose decision is final. It is customary for the commanding officer of the post or camp where the trial is held to detail a suitable officer to act as counsel for the accused. The right to counsel does not exist in case of trials by a summary court.

Duty of Counsel.—The officer acting as counsel shall perform the duties which usually devolve upon the counsel for the defense before civil courts in criminal cases. He shall guard the interests of the accused by all honorable and legitimate means, but shall not obstruct the proceedings by frivolous and useless objections and discussions.

Right of the Accused to Interview.—The accused will be permitted to interview his counsel and witnesses for the defense as often as is necessary for the proper preparation of his defense.

QUESTIONING OF WITNESSES

When there is no reporter, all questions will be reduced to writing. If the court has a stenographic reporter all questioning may be done orally.

REPORTER

Employment.—Under such regulations as the Secretary of War prescribes, the president of a court-martial or military commission or a court of inquiry has power to appoint a reporter, who shall record the proceedings of and testimony taken before the tribunal.

Reporters are employed only when especially authorized by the appointing authority. This authorization is usually stated in the order appointing the court. Reporters for special courts-martial will not be authorized, except when the appointing authority requires the testimony to be reduced to writing. The reporter of a court-martial is usually a civilian stenographer. A soldier may be detailed to serve as a reporter before the above-mentioned military tribunals, who shall receive a certain pay differing from that paid a civilian reporter.

Completion of Record.—The judge advocate or recorder shall require the record of the proceedings for each session to be finished, together with one carbon copy of the same, not later than twenty-four hours after the adjournment of the session. The complete record will be completed and ready for authentication not later than forty-eight hours after the final adjournment in the case.

Extra Compensation for Clerical Duties.—No person in the military or civil service can lawfully receive extra compensation for clerical duties performed for a court, except as provided for in a detail of a soldier as reporter.

INTERPRETER

Under such regulations as the Secretary of War may prescribe, the president of a court-martial, military commission, court of inquiry, or summary court may appoint an interpreter when necessary. It is not necessary to obtain the authority of the appointing officer as in the case of reporters. They are paid at the same rate as civilian witnesses.

CHALLENGES

When the names of the members of the court-martial who are present have been read to the accused, upon his introduction to the court, he is asked by the judge advocate whether

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he objects to being tried by any member present. Should he reply in the negative, the court and judge advocate will be sworn. If he states that he objects to being tried by a member, he will state also the grounds upon which he makes his objection, to which the challenged member is given an opportunity to reply. The challenged member withdraws and the court is closed and decides as to whether or not the objection is to be sustained. When the court is opened the president announces the decision and the member is either excused or permitted to continue to sit in the case. In this matter the accused is given the right to challenge individually any and all members of the court. Neither a summary court officer nor a judge advocate is subject to challenge.

GROUNDS FOR CHALLENGE

(a) *Principal Challenges.*

1. That he took part in the investigation of the charges, officially.
2. That he personally investigated the charges and had expressed an opinion in the matter as to the guilt or innocence of the accused.
3. That he is the accuser.
4. That he is a witness for the prosecution.
5. That upon a re-hearing of the case, he sat as a member on the former trial.
6. That in the case of the trial of an officer, the member will be promoted by the dismissal of the accused.
7. That he is related to the accused.
8. That he has a declared enmity against the accused.

(b) *Challenges for Favor.*—Where prejudice, hostility, bias, or intimate personal friendship is alleged, it is for the court, after hearing the grounds of challenge stated and the reply of a challenged member, or any other evidence presented, to determine whether or not the member is disqualified.

Challenges of New Members.—When new members join the court, the accused shall be given the opportunity to challenge them. The record in each case must show that the right to challenge has been given the accused, not only at the original session, but at any time that new members join the court.

Challenge by Judge Advocate.—By a custom of the service, the judge advocate may also challenge, for cause, in the same manner as the accused.

Member Cannot Challenge.—There is no authority for a member of a court-martial to challenge another member, but when a member has knowledge of the fact that another member is the accuser or a witness for the prosecution, he will so notify the court in order that proper action may be taken.

Member Disqualified but Not Challenged.—In the absence of a challenge the court cannot excuse a member from sitting on a case. A member not challenged, who thinks himself disqualified for certain reasons, may announce in open court his supposed disqualification in order that he may be challenged, or he may apply to the appointing authority to be relieved.

Waiver of Objection.—The rule is that challenges should be made before the arraignment, but if an objection to the competency of a member was known and not made at that time, it is considered to be waived. If the incompetency, however, was not known at the time of the arraignment, the challenge may be made at any stage of the proceedings.

Liberality in Matters Pertaining to Challenges.—The court should be liberal in passing upon challenges, but must be specific, and the objections should not be sustained upon the mere asser-

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tion of the accused, except where admitted by the challenged member.

Invalidated Cases.—In cases which are invalidated because of failure to excuse a member who is the accuser or a witness for the prosecution, a new trial may be ordered.

Member, Witness for the Defense.—The fact that a member is a witness for the defense does not necessarily disqualify him.

Member Called as Witness by Court.—Should a member of the court be called as a witness for the prosecution, the character of his testimony should be carefully considered and, in case of doubt as to the justice of his sitting as a member, he should be excused.

OATHS

Oaths of Members.—After the challenges have been disposed of, the judge advocate will administer the oath to the court. In cases where members object to taking an oath, the closing sentence of adjuration may be omitted.

Members of the court are sworn for each case tried.

Oath of Judge Advocate.—The court having been sworn by the judge advocate, the president administers the oath to the judge advocate.

During the administering of oaths all persons in the court room are required to stand. In taking an oath the head and the right hand will be bare and the right hand raised.

Other Oaths.—The judge advocate administers all other oaths in connection with the trial, including witnesses, reporters, interpreters, etc.

Oaths to Test Competency.—When a member of a general or special court-martial is challenged and it is desired to question him regarding his eligibility, the judge advocate will administer to him the following oath:

"You swear that you will make true answers to all questions touching your competency as a member of the court in this case. So help you God?"

This is called placing a member upon his *voire dire.*

CONTINUANCE

A continuance is a delay granted to the prosecution or defense in procedure with the trial. It is usually given in order to allow the judge advocate or the counsel to procure evidence, or otherwise to prepare the case.

Authority For.—A court-martial may for reasonable cause grant a continuance to either party for such time and as often as may appear to be just. If an application for an extended delay appears to be well founded it should be referred to the appointing authority for his decision.

If the counsel for the accused has not taken proper advantage of opportunities to prepare his case, the court may decide that the right to a continuance does not exist.

ARRAIGNMENT

The arraignment consists of the reading by the judge advocate to the court and to the accused in open court of the charges and specifications against the accused.

PLEAS

Procedure, discharges, and specifications having been read, the accused is required to plead to each specification of the first charge separately and then to the first charge. He then pleads to each specification separately and then to the second charge, and so on.

Kinds of Pleas.—Special pleas are pleas for the jurisdiction, pleas in abatement, pleas in bar of trial. Then there is what is known as a plea to the general issue.

A plea to the jurisdiction denies the right of the court to try the case for

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certain reasons given. Pleas in abatement are based upon some defect in the charge or specification, and usually only operate to delay the trial. Pleas in bar of trial if sustained are substantial and conclusive answers of particular charges or specifications. One of the most usual pleas in bar is the Statute of Limitation, which deprives the Government of the power to try and punish offenses after specified periods have elapsed since the offense was committed and under certain conditions.

Another plea in bar often arises by reason of the law prohibiting the trial of a person the second time for the same offense. A pardon may also be the basis of a plea in bar.

Pleas to the General Issue.—This term is applied where the accused pleads guilty or not guilty to each charge in the specification, or guilty to a portion of the specification and not guilty of the other portion.

Change of Plea.—A court-martial may permit an accused to withdraw a plea of guilty and substitute one of not guilty or vice versa.

Taking of Testimony on Plea of Guilty.—The mere fact that the accused pleads guilty does not necessarily preclude the taking of testimony upon behalf of either the prosecution or the defense. It may be desirable to introduce witnesses to show the extent or decree of guilt of the accused or the seriousness of the offense. The accused may also, in making his plea, plead guilty of a lesser kindred offense, that is, guilty of an offense of the same general nature, but less serious.

ATTENDANCE OF WITNESSES

Process to Obtain Witnesses.—Every judge advocate of a general or special court-martial and every summary court-martial shall have power to issue process to compel witnesses to appear and testify, as in the case of courts of the United States with criminal jurisdiction. Such process shall run to any part of the United States, its territories and possessions. The court in its discretion may also direct the judge advocate to require the presence of a witness.

Subpoena.—For the attendance of civilian witnesses a subpoena will be issued in duplicate. It may be legally served by a person in the military service or by a civilian. Usually it is served by an officer or a non-commissioned officer. Proof of service is made by indorsing on the remaining copy a sworn statement that the service was made. If the witness cannot be found the judge advocate should be informed. A judge advocate cannot subpoena a civilian witness to appear before himself for preliminary examination.

Summoning of Witnesses.—The judge advocate will summon the necessary witnesses for the trial, but will not do so where expense to the Government is involved without the order of the court, unless satisfied that their testimony is material and necessary. The summoning of witnesses for the prosecution and the defense is done by the judge advocate. Where the summoning of a number of witnesses at the request of the defense will result in unreasonable inconvenience or expense to the Government, the judge advocate will use his discretion in the matter.

Advance Notice to Witnesses.—The judge advocate will endeavor to issue subpoenas to military witnesses at such time as to give them at least twenty-four hours' notice before starting to attend the court.

Attendance of Military Witnesses.—The attendance of military witnesses who are stationed where the court is sitting, or where no expense will be

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involved in getting to and from the court, will ordinarily be obtained by informal notice sent by the judge advocate to the person concerned. If for any reason a formal notice is required, the judge advocate will request the proper commanding officer to order the witness to attend. Orders for the attendance of witnesses involving cost for travel must be issued by the department or other proper commander. No fees will be paid to military witnesses. Military witnesses are given only such mileage allowance as is due them under ordinary travel orders. Retired persons, officers, or soldiers, not on active duty, appear before courts under the rules and are entitled to the same fees as civilian witnesses who are not in the Government's employ.

Procedure to Secure Attendance of Civilian Witnesses.— Ordinarily the judge advocate will endeavor to secure the attendance of a civilian witness by informal means, sending him the duplicate subpoena properly filled out, with a request to accept service thereon and to return it to the judge advocate. A penalty envelope shall be enclosed for the purpose. If such informal methods are ineffective, formal subpoena will be issued, with a view to service by the proper person. Should the person desired as a witness reside elsewhere than at or near the place where the court is sitting, but is near another military post, the subpoena will be sent to the commander of that post with request that he cause it to be served. Should travel be necessary for the service of this subpoena, it will be sent to the authority competent to issue travel order with request that it be served.

Accused to Be Confronted with Witnesses.—The accused must be confronted with witnesses in capital cases. Depositions cannot be introduced in capital cases. When the judge advocate believes that the interests of justice demand that the accused be confronted by a witness against him, or believes for any reason that a witness should testify in the presence of the court, he will take the necessary steps to secure the attendance of such witness.

Books, Documents, or Papers.—If a civilian has in his possession a book, document, or paper desired to be introduced in evidence, what is known as a subpoena *duces tecum* will be prepared and issued by the judge advocate, directing the person to appear in court and to bring with him such book, document, or paper. Should a person in the military service possess such a book, document, or paper, he will be directed by proper authority to appear in court with the desired book, document, or paper.

Warrants of Attachment.—Should a civilian witness fail to comply with the law in regard to obeying a subpoena, his attendance may be brought about by means of what is termed a warrant of attachment. When it becomes necessary to issue a warrant of attachment, the judge advocate or summary court will direct or deliver it for execution to an officer designated by the department commander for the purpose.

As the arrest of a person under a warrant of attachment deprives him of his liberty, the authority for such warrant may be inquired into by a writ of *habeas corpus*. Therefore, the officer executing the warrant of attachment should be provided with the following papers:

(a) Copy of charges properly authenticated.

(b) Copy of the order appointing the court-martial.

(c) The original subpoena with proof of service.

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(d) The affidavit of the judge advocate or summary court that the person is a material witness; that he has failed to appear; that he has offered no valid excuse; and that he has received the original warrant of attachment.

HABEAS CORPUS

Habeas Corpus and Warrant of Attachment.—Should the officer executing the warrant of attachment be served with a writ of *habeas corpus* from a United States Court or judge for the production of the person attached, the writ will be promptly obeyed, and a return made setting the reasons for his restraint. The officer upon whom the writ is served will report by telegraph the facts to the Adjutant General of the Army and the Department Commander. If the writ of *habeas corpus* be issued by a state court or judge, the officer shall make a respectful return in writing, informing the court or judge that he holds the person named in the writ by authority of the United States, pursuant to a writ of attachment issued by the judge advocate of a court-martial, and that the Supreme Court of the United States has decided that state courts and judges have no jurisdiction in such cases. The officer will hold the prisoner in custody under his warrant and refuse obedience to the mandate of any government except that of the United States.

Punishment for Refusal to Qualify as Witness.—There is no power in a court-martial itself to compel a witness to testify or to punish him for not testifying. Procedure in such a case will be made by the United States District Attorney, or officer prosecuting for the Government. Upon proper information the District Attorney or other prosecuting officer for the United States will file information against and prosecute the person. The punishment shall be a fine not to exceed $500, or imprisonment not to exceed six months, or both.

Tender of Fees Preliminary to Prosecution.—In case of a civilian witness who has been duly subpoenaed and wilfully neglects or refuses to appear or qualify as a witness, he will be tendered or paid by the nearest quartermaster one day's fees, and the mileage to and from the court, and again called upon to comply with the requirements of the law. Should he fail to comply the second time, a report of the case will be made to the officer having general court-martial jurisdiction over the command, with a view to presenting the facts to the Department of Justice for punitive action.

CONTEMPT

(a) *Authority to Punish.*—The court-martial may punish at discretion, subject to certain limitations, any person who uses menacing words, signs, or gestures in its presence, or who disturbs its proceedings by riot or disorder. This power is vested in general, special, and summary court punishments for contempt, while other punishments require the approval of the reviewing authority.

(b) *Persons Who May Be Punished for Contempt.*—Any persons, whether they be in the military service or not, may be punished for contempt of a military court.

DEPOSITIONS

When Admissible.—Depositions may be read in evidence before a military court or commission in any case not capital. Depositions may be taken when the witness resides beyond the limit of the state, territory, or district in which the court is sitting, or is

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actually unable, by reason of age, sickness, etc., to appear before the court.

Before Whom Taken.—Depositions may be taken before, and authenticated by, any officer, military or civil, authorized by the laws of the United States to administer oath.

THE EVIDENCE

Requirements of the Oath.—The oath taken by the members of general and special courts-martial requires them to try and determine, according to the evidence, the matter before them. A summary court, although it takes no oath, is bound by the same rule. The evidence referred to, upon which the court must decide the case, means all the matters of fact which the court permits to be introduced of which it takes judicial notice with a view to proving or disproving the charges. Any personal information in the possession of individual members or in fact in the possession of the court itself, unless it has been received in accordance with the law and accepted as evidence, should not be considered in the case.

Burden of Proof.—The burden of proof rests entirely with the United States. It is always assumed that the accused is innocent until the proof of his guilt is established.

Protection of Witnesses.—It is the duty of the court to protect every witness from irrelevant, insulting, or improper questions, or from harsh or insulting treatment, and from unnecessary inquiry into his private affairs. The intimidation of witnesses is also forbidden.

Character of Accused.—The question of character can be raised only by the accused. Should the accused bring up the matter of his character the judge advocate or court can then proceed to investigate and bring out by questioning all the facts in the case; but unless the accused has brought up the matter himself, neither the judge advocate nor the court is permitted to question the character of the accused.

Where the accused takes the stand as a witness, however, his character for veracity may be attacked in the same manner as that of any other witness. There is one other exception to the rule of inadmissibility of evidence as to character on the part of the prosecution—where, by a proof or evidence of the accused having committed acts similar to that for which he is being tried, said proof may be admitted to show the motive or the tendency toward the committing of that particular kind of crime.

Interest or Bias.—The fact that a person is interested in or hostile to the accused does not in any way disqualify him as a witness. The weight of his testimony, however, must be decided by the court.

Accused as Witness.—The accused shall, at his own request but not otherwise, be a competent witness, and his failure to make such request shall not create any presumption against him. The prosecution and the court have a right to examine and cross-examine the accused as in the case of any other witness. He can, however, be cross-examined only upon those offenses upon which he has voluntarily testified.

Dying Declarations.—While hearsay evidence is not as a rule admissible, there is an exception in the case of dying declaration, and it is permitted that the dying declaration of a person, against whom violence has been committed, be received as evidence before a court. Owing to the mental depreciations of persons giving a dying declaration, however, much caution must be exercised in giving weight to testimony involved.

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Incriminating Questions.—A witness is privileged to refuse to respond to a question the answer to which may incriminate him. If there is a question, however, as to whether or not the answer would incriminate the witness, the matter is decided by the court and the witness will answer or be excused from answering the question according to its decision. The right to refuse to answer such questions is a personal one and may be waived in the discretion of the witness.

Physical Examination.—It is not considered a violation of the rule permitting a witness to refuse to answer, except when the answer would incriminate him, for the court to require a physical examination of the accused, though he be a witness in his own defense.

Examination of Witnesses.—Witnesses will be examined apart from each other, no witness being allowed to be present during the examination of another who is called before him. This rule, however, is not inflexible.

Number of Witnesses Required.—The general rule is that there must be two witnesses to the act.

Order of Examination.—The regular sequence in the examination of witnesses is as follows:

Witness for the prosecution:

Direct examination by the judge advocate.

Cross-examination by the counsel for the accused.

Re-direct examination by the judge advocate.

Re-cross-examination by the counsel for the accused.

Examination by the court.

Witness for the defense:

Direct examination by the counsel for the accused.

Cross-examination by the judge advocate, and so on.

When a witness for the defense is called, the judge advocate will request the following of a civilian witness:

State your name, business, profession, or occupation.

He will ask of all witnesses:

Do you know the accused, if so, state who he is?

In the case of a person in the military service as a witness, the judge advocate will announce his name, rank, and organization.

Witnesses will be cross-examined only on matters upon which they were questioned in direct examination. Should either side desire to bring out any matter which has not been touched upon in direct examination, they may recall the witness for their particular side and then by a direct examination bring out the matter desired.

Leading Questions.—By the term "leading question" is meant a question which suggests the answer that it is desired the accused shall make. In the direct examination leading questions will not be asked. They may be asked, however, in the cross-examination.

Swearing of a Recalled Witness.—The administering of an oath to a witness a second time on the same case is not necessary. It is customary to require that the judge advocate caution and remind him that he is under oath for the present case.

STATEMENTS AND ARGUMENTS

Statements.—After the introduction of evidence has been completed, the accused personally, or his counsel, may make an unsworn or written statement as to the case. It may be a brief summary of the evidence, or it may be a statement of extenuating circumstances, or a complete oral statement or story of the whole affair. Such a statement is not subject to cross-examination. While such a

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statement has not the weight of testimony, it should be taken into consideration by the court.

Arguments.—After the accused has made a statement, or waived his right to do so, the judge advocate, and the accused through his counsel, may present arguments. The judge advocate has the right to argue the opening and the closing argument, but the court may permit the defense to controvert any new matter in the closing argument of the judge advocate.

FINDINGS

Voting.—Beginning with the youngest in commission, the court will vote upon the specifications of the first charge in order, and then the first charge, followed by the specifications in order and then the second charge, and so on. A two-thirds vote is necessary to convict in capital cases. A doubt vote is equal to a vote of not guilty, and in all cases a majority is necessary to convict.

Reasonable Doubt.—A member in voting guilty should be satisfied beyond any reasonable doubt as to the guilt of the accused.

Guilty of a Lesser Included Offense.—If the evidence prove the commission of an offense included in that with which the accused is charged, the court may except words of the specifications, and if necessary substitute others instead, pronounce the innocence of the accused of the excepted words, and the guilt of the accused of the substituted words.

An example of such a finding would be the case of a charge of desertion. The following might be the finding:

Out of the specification guilty except the words "desert" and "in desertion," substituting therefor, respectively, the words "absent himself without leave from" and "without leave," of the excepted words not guilty, of the substituted words guilty, and of the charge not guilty, but guilty of violation of the Sixty-first Article of War.

Guilty Without Criminality.—A finding of "guilty without criminality" is not consistent and should not be made. If the accused is found to have committed the act, but without guilty intent or knowledge sufficient to constitute the offense, the court should, as to the specification, find the accused "not guilty."

Recording of Finding or Sentence.—The judge advocate will himself write in the finding and sentence in every case. The fact that the sentence or finding, or both, have been made known to a reporter or clerk, however, cannot affect the legality of the proceedings or sentence.

PREVIOUS CONVICTIONS

After the court has come to a finding of "guilty" in a case, the court will open and the judge advocate will be called upon to state whether or not there is any evidence of previous convictions, and, if so, to read them to the court in the presence of the accused. The accused will be called upon to state any legal objection he might have to any of the evidence.

SENTENCE

Voting.—After the finding has been determined upon and resulted in a conviction of an offense, the court will close and decide upon a sentence. Those members desiring to propose sentences write them on slips of paper and hand them to the president. The president then reads them, commencing with the lightest, and each in turn is voted on, and the first sentence that receives the necessary majority becomes the sentence to the accused. Where the sentence is specific and mandatory for a single charge, that sentence is adopted. If, in addition to the finding of "guilty" on a charge

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where the specification is mandatory, there be other specifications, the mandatory sentence and in addition such other necessary punishment may be awarded as the case may seem to require.

Sentences for Officers.—Legal and customary sentences for officers are death, dismissal, confinement at hard labor, loss of rank, suspension from rank, suspension from command, suspension from duty, loss of all or part of pay, fine or forfeiture of pay, confinement within certain limits, reprimand, and admonition.

Sentences for Soldiers.—For soldiers legal and customary sentences are: death, dishonorable discharge, confinement at hard labor, confinement, forfeiture of pay, detention of pay, reduction to ranks, reprimand, deprivation of certificate of eligibility to promotion.

Recommendations to Clemency.—When a court-martial, or any member thereof, desires to submit a recommendation to clemency, including a recommendation for the suspension of all or part of the sentence, such recommendation will be signed by each member concurring therein. The communication will contain a statement of the reasons upon which the recommendation is based and will be appended to the record of the trial.

CONFINEMENT IN A PENITENTIARY

When Authorized.—Under the Federal Penal Code any offense is a felony which is punishable under the Code or other Statute of the United States by confinement in excess of one year. But no person may be confined in a penitentiary unless the punishment actually adjudged for an offense of which he has been convicted exceeds one year. A sentence to confinement in a penitentiary will be awarded in those cases only where the act committed is punishable by penal servitude in the state, territory, or district in which the act was committed. In awarding the punishment the place of confinement will not be mentioned by the court-martial, but will be left to the discretion of the reviewing authority.

ACTION ON PROCEEDINGS

Sentence Not Effective Until Approved.—No sentence of court-martial shall be carried into execution until the same shall have been approved by the officer appointing the court or by the officer commanding for the time being.

Effect of Approval and Disapproval.—While approval gives life and operation to a sentence, disapproval, on the other hand, nullifies it.

Power to Mitigate Punishment.—The reviewing authority has the power to reduce the sentence in quantity or quality, provided that the general nature of the punishment remain the same. He has also power to remit the whole or unincluded part of the sentence. The power of remission and mitigation extends to all uncollected forfeitures also.

Commutation of Sentences.—The power to commute sentences imposed by military tribunals can be exercised by the President of the United States alone.

Adding to Sentences.—There is no authority that exists which can in any way increase a sentence given by a court-martial. The only way in which this can be effected is for the reviewing authority to return the proceedings in the case to the court for reconsideration, with a statement to the effect that the sentence is inadequate. Should the court adhere to its former decision, there is no power which can increase it.

Sentence in Excess of Legal Limit.—

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Where a sentence is in excess of a legal limit, such portion of it as is legal may be approved and executed, the illegal portion of the sentence being disapproved, without effect.

Suspension of Sentence.—Any officer who has authority to carry into execution the sentence of death or of dismissal of an officer may suspend the same until the pleasure of the President be known. The authority competent to order the execution of a sentence adjudged by a court-martial may, if the sentence involve neither dismissal nor dishonorable discharge, suspend the execution of the sentence in so far as it relates to the forfeiture of pay or to confinement, and the person may be restored to duty during his suspension of confinement. Within one year after suspension, such order of suspension, for sufficient cause, may be vacated and the execution thereof directed by the military authority issuing it. If the order of suspension be not vacated within one year, it shall have the effect of a remission of the sentence. The authority competent to order the execution of a sentence including dishonorable discharge may suspend such dishonorable discharge until the soldier is released from confinement, but the order of suspension may be vacated at any time and the execution of the dishonorable discharge directed by the officer suspending the discharge. In cases of suspended sentences the United States Disciplinary Barracks and penitentiaries are excluded from these rules.

Date of Beginning of Sentences.—The order promulgating the proceedings of the court and the action of the reviewing authority will, when practicable, be of the same date. When this is not practicable, the order will give the date of the action of the reviewing authority, which date will be the beginning of the sentence of confinement. A sentence of confinement is continuous until the term expires, except where the prisoner is absent without authority or on a parole which proper authority revoked, or is delivered over to the civil authorities. The amount of time spent in confinement prior to the promulgation of a sentence does not form a part of a sentence, but due consideration should be given to such time when the sentence is passed upon by the reviewing authority.

Applications for Clemency will not be made in excess of one in every six months.

COURTS OF INQUIRY

When or By Whom Ordered.—A court of inquiry to examine into the nature of any transaction or of accusation or imputation against any officer or soldier may be ordered by the President or by any commanding officer, but a court of inquiry shall not be ordered by any commanding officer except upon the request of the officer or soldier whose conduct is to be inquired into.

Neither the President nor a commanding officer is obliged to order a court of inquiry on demand of an officer or soldier. He will use his discretion in the matter and act according to the necessities of the case.

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The OFFICERS' RESERVE CORPS

THE Officers' Reserve Corps was created by the National Defense Act of June 3, 1916 (Sections 37, 38, 39, 49, 51). The provisions and regulations, prescribed by the President to carry the same into effect, are contained in General Orders No. 32, War Department, 1916. Copies of these may be had upon application to the Adjutant General, War Department, Washington, D. C.

AGE LIMITS. For line officers (Infantry, Cavalry, and Artillery):

For Second Lieutenant—21 to 32 years of age.

For First Lieutenant—21 to 36 years of age.

For Captain—21 to 40 years of age.

For Major—21 to 45 years of age.

For the Staff Corps (Quartermaster, Engineer, Ordnance, Signal, Judge Advocate, and Medical Corps) there are no age restrictions. (Paragraph 111, page 11, G. O. No. 32.)

APPLICATIONS. Applications for examination should be addressed in writing to the Commanding General of the Department where the applicant lives.

All applications must be accompanied by "recommendations and other documents of a commendatory or explanatory character," and if the applicant has served in the Regular Army, volunteer forces, or militia, he must submit his discharge papers or, if still in the service of any such organization, the recommendations of his immediate and higher commanders. If he has attended a military school or college, he must submit a diploma or certificate of graduation.

It is recommended that in the case of civilians, three letters of recommendation be sent; that in case of Military Training Camps men, their certificates of service be forwarded, and further, in cases where certificates or diplomas cannot be readily sent, that verified copies or an affidavit, stating that the applicant has lost his certificate or diploma and giving the essential facts, be sent instead.

RESTRICTIONS. No applicant will be examined who is an officer of the Regular Army on the active list or of the National Guard, or who is not a citizen of the United States.

EXAMINATIONS. Boards for the examination of applicants are appointed by the Commanding General of the Army Department wherein the applicant resides. The time and place for the holding of such boards are wholly within the discretion of the Commanding General.

PHYSICAL EXAMINATION. All applicants for commissions in the Officers' Reserve Corps must first pass a physical examination. Defective eyesight is not a bar if the defect can be remedied by eye-glasses.

MENTAL EXAMINATION. Mental examinations are oral or practical or both unless in case of emergency. The Examining Board is given absolute discretion to conduct an examination in such manner as it sees fit, and these examinations are especially directed to ascertain the practical capacity of the applicant, and the record of previous service and training is considered as part of the examination.

The subjects covered are contained at length in G. O. No. 32, pages 14 to 36. In general, the examinations for line officers cover Army Regulations, drill regulations, field service regulations, small arms firing regulations, military law, and topography,

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with variations according to the branches of the service.

COMMISSIONS. Applicants who successfully pass their physical and mental examinations are commissioned by the President of the United States for a period of five years to be officers of the rank and in the arm of the service or corps for which they have qualified. Such commissions give them the rank and pay of Regular Army officers for similar service. An officer commissioned under this Act, on reaching the maximum age limit of his rank, will be honorably discharged, unless in time of war, in which case he will continue in his duties until the expiration of the war.

OBLIGATIONS OF SERVICE. In time of peace, a reserve officer may be ordered to duty with troops, for field exercises or instruction, for a period not to exceed fifteen days in any one calendar year, but, with his consent, this period may be extended. In time of "actual or threatened hostilities" he would be subject to call and duty as a temporary officer with troops or in such other capacity as the Government may prescribe. Reserve officers must first be called into service before the appointment of volunteer officers.

SPECIAL NEEDS OF THE ARMY. The special need to-day in the Officers' Reserve Corps is for line officers of the rank of first and second lieutenant.

For older men and specialists, the situation is as follows:

The Quartermaster's Corps, in case of a sudden increase of the Army, would need considerable numbers of men who have had large business experience, particularly in purchasing supplies of various kinds. The special needs are men with experience in motor cars, to take charge of motor truck, motor car, and motor cycle companies; and men with experience in transportation and navigation companies, for duty on transports and docks and for overseas service.

In regard to the Engineer Corps, the engineering societies are in touch with the War Department. The special need is for junior officers.

For the Signal Corps, men qualified in telegraph and radio work are needed. The telephone branch is well cared for.

In the Ordnance Department the needs are mechanical and electrical engineers for work in munitions factories and as inspectors and chemists for work in explosive plants. Men now in munitions and manufacturing plants, with administrative capacity and experience, are especially desired.

The Judge Advocate General's Department is very small. The need of officers is not great and only those who have had experience in international and military law are wanted.

It is not our purpose to urge all training camp men to file applications for the Officers' Reserve Corps. Our purpose is to call their attention to the special requirements and to suggest that they consider their own qualifications. In time of war the responsibilities that fall upon officers are great, and it is particularly desirable to encourage only men who are prepared to assume and fulfil such responsibilities in the most conscientious and intelligent manner. There are thousands of such men, however, and these are urged to apply now for permission to take the examinations.

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May 1917

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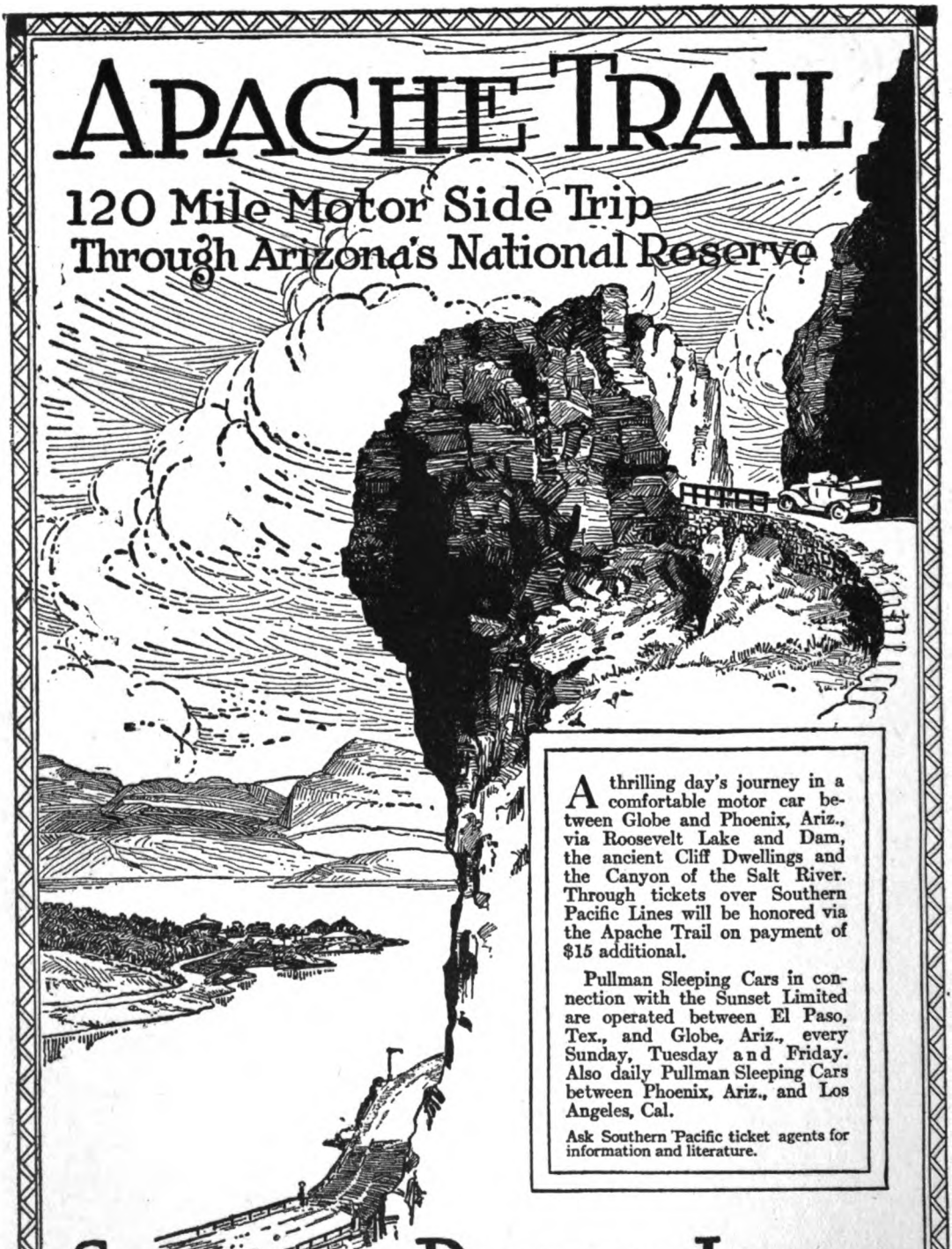

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NATIONAL SERVICE

May, 1917

EDITORIALS

THE PRESIDENT'S MILITARY POLICY AND WHAT IT MEANS

An Editorial by Colonel "X," a Recognized Authority on Military Organization

IN HIS address to Congress on April 2d, the President stated in broad terms what he recommended as the policy of the Government in the organization and training of armies. He proposed that the forces now authorized by law should be expanded to the maximum legal limit, that as soon thereafter as practicable a new force of 500,000 men should be organized and that, if necessary, this force should be followed by further increments of 500,000 men as rapidly as they can be handled in training.

This programme is based on the idea of a systematic development of the man-power of the Nation. It contemplates participation in field operations, if this should become necessary, as soon as practicable, with a force organized at the start on the principle of expansion. It recognizes the following facts of the situation: first, that our present or available military capacity is very small, and, second, that our potential or ultimate military capacity is very great. It proposes, in short, to make our potential military capacity available as rapidly as practicable.

The rate at which we can form effective military forces is dependent upon several factors, but the elements of the problem can be apprehended best by arriving at a clear idea of the character of troops that the military situation demands. As indicated by the President in his address these forces are to be formed to defeat Germany and to bring the war to an end. This means that the mission of our troops may ultimately be to attack and defeat German troops in a European theatre of war. In order to accomplish this mission it is obvious that our soldiers must be thoroughly trained, completely armed and equipped, and skilfully led by competent officers. They must be efficient individual soldiers formed into highly drilled regiments, and the regiments of the several arms must be combined into divisions capable of efficient joint action. The history of the war amply confirms the statement that even under the most favorable circumstances new divisions cannot be prepared for offensive action in less than one year, and we may take it for

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granted that the first of the several contingents mentioned by the President will not be ready for active military operations before the spring of 1918.

Assuming, then, that each contingent will require substantially one year's training, we can predict the maximum force in the field at any time after the spring of 1918 if we can determine the size of the first contingent and the intervals of time elapsing between their several dates of organization.

Now as it is obvious that the largest possible force should be deployed at the start, it may at once be asked, why should there be any appreciable interval between these contingents? Why not immediately enroll and train at least 2,000,000 men so that we can make a decisive impression a year from now if we are called upon to enter the field?

There are several reasons why we cannot do this. In the first place, if we should add more than 500,000 men to our present establishment at one time we should not have the arms and equipment for them, and without proper arms and equipment we cannot give modern soldiers their proper training. In the second place our present stock of military instructors is barely enough for the first 500,000 recruits that we shall be able to equip. There must be an interval of at least three or four months before partially trained citizen soldiers can be prepared to act as additional officers and non-commissioned officers for the next contingent, and it will probably be at least that long before the equipment for the new contingent can be provided. When the third contingent can be received cannot, of course, be definitely predicted, but, as before, the provision of its equipment depends upon the capacity for expansion of our industries, and its training depends upon the development of new military leaders and instructors drawn from the earlier contingents. Assuming, then, that twelve months will be required for the organization, equipment, and training of each new division and its corps of officers, we may say that with judicious management we should be able to reinforce the Allies with 500,000 effectives by May, 1918, to expand this to 1,000,000 men by August, 1918, and to raise this force to 2,000,000 men by May, 1919. If necessary, the field force indicated for 1919 might be materially more than 2,000,000 men, for after we have once placed our industries on a war basis and have developed our machinery for training officers and non-commissioned officers, our capacity for expansion will rapidly increase.

But in order to explain certain important factors of modern military organization that are not generally understood, let us assume that our field forces are to be 1,000,000 men in 1918 and 2,000,000 men in 1919, as indicated above, and let us also assume that these forces are to be actively engaged in serious military operations such as might be demanded of us if Germany should eliminate Russia from the war and find herself free to deal with the declining man-power of Great Britain and France. Under these conditions how many men would it be necessary for us to enroll and train in order to keep up full fighting power until December 31, 1919?

The following table contains an estimated answer to this question based upon the experience of Great Britain in the present war:

Initial strength of first contingent, 1918.....	500,000
Initial strength of second contingent, 1918.....	500,000
Initial strength of 1919 contingent.....	1,000,000

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Wastage of first contingent, 1918—20 months at 5 per cent. per month	500,000
Wastage of second contintingent, 1918—17 months at 5 per cent. per month	425,000
Wastage of 1919 contingent —8 months at 5 per cent. per month	400,000
Total men required for field forces	3,325,000

It will be noted that this makes no allowance for forces of various kinds that must be maintained at home and no allowance for wastage during the twelve months of training.

The figures above are not presented as an accurate estimate but simply in order to point out what superficial observers so generally ignore, that the maintenance of a given force in the field requires a total enrollment greatly in excess of the force actually in contact with the enemy. At the close of 1915, although more than 3,000,000 volunteers had enrolled in Great Britain, the forces actually in the field were only 1,250,000. England had reached a condition in which the initial volunteer impulse, great as it was, had spent itself. It was necessary to expand the forces in the field in order to meet her obligations to her allies, but voluntary recruitment was no longer sufficient to maintain losses, much less to give the men for new formations. Expansion was about to give way to contraction. This condition finally brought before her the alternatives of compulsory service or defeat.

In recommending to Congress that our national policy should be to expand the forces now authorized at once, and to follow them by successive increments of 500,000 men each, the President stated that in his opinion these forces should be obtained through obligatory service. This implies a preference for compulsory service as against voluntary service. It would have been much nearer the facts of military organization if he had stated positively and definitely that it would be impossible to carry out the proposed programme except on the basis of compulsory service. In no other way is it possible to develop the man-power of a nation on the scale and with the system and regularity required in modern warfare. We may raise a considerable number of regiments on the voluntary basis, but volunteering will not provide the subsequent drafts of trained men required to keep these regiments full in the presence of the enemy.

In considering the possible employment of American soldiers in a European theatre of war we must not overlook the fact that this can only be done in coöperation with the Allies and that we would be a hindrance rather than a help to the Allies unless we are prepared to bear a definite and clearly understood share of the burden. Let us suppose that we are to operate on the western front. If we are to do this as an American army worthy of the name we must be prepared to take over a sector of the front with unquestioned capacity not only to hold it but to advance it. It would not be consistent with American self-respect to place a mere sentimental color guard in the trenches, partially trained and equipped, and requiring the protection and support of trained French or British divisions to keep us from getting hurt; and it would not be welcomed by the Allies, for they are hardened by the grim facts of war and do not find sentimental reasons for assigning sectors of their trench to troops that are not prepared to hold them. When the sorely tried and over-burdened French clung to their extended

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lines for a year before English troops were sufficiently trained to relieve them, we may rely upon it that they will not find a place for raw American levies at the risk of the integrity of their lines. We must remember that the Hindenburg line is not a Bull Run, where raw levies can expect the advantages that go with operating against raw levies on the other side.

The facts of the situation are very clear. We cannot begin to exert a decisive or even a material influence in the field before the spring of 1918, and we cannot exert it even then unless we devote all this year to systematic and intelligent preparation. We cannot afford to send over a small picked force this year, for every citizen with any military training must be employed at home as an instructor of the greater forces that will be required in 1918. The problem before us is a problem of organization to be approached with the same common sense that Americans employ in dealing with problems of commercial organization. We must have an adequate and assured supply of men available immediately as equipment and facilities for training become available. We must immediately expand our resources for manufacturing equipment, and we must immediately expand our limited number of trained soldiers into an efficient corps for training great masses of troops fully prepared for modern war. We must realize as soon as possible that modern war is a serious business proposition.

THE PRESIDENT'S PROCLAMATION OF APRIL 16TH

IN HIS proclamation of April 16th, summoning all citizens of the United States to "speak, act, and serve together," the President sounded a ringing call for national service. The proclamation goes to the very root of the problem. We must transform ourselves into a nation in arms, organized in the highest degree to expend our last ounce of national energy to bring the German Government to terms and end the war. In its very magnitude the task challenges the genius of the American people.

As the President points out, the preparation of the Navy and the creation of a large Army is but part of the work ahead. Back of the battle line there must be developed those vast forces that feed, clothe, equip, and care for the fighting edge of the war machine. The industrial armies must be so efficiently organized that our farms, our factories, our shipyards, our mines will attain a maximum of capacity. And in creating the military forces, care will be taken not to draw upon those elements of our citizenship whose capabilities are best directed to industrial service.

As the President so trenchantly said: "The men and the women who devote their thought and their energy to these things will be serving the country and conducting the fight for peace and freedom just as truly and just as effectively as the men on the battlefield or in the trenches."

The war may be prolonged beyond our expectations. The sacrifices before us may be even greater than we now imagine. One thing is certain: the mightier our striking power the sooner will peace be restored.

TRAIN THE OFFICERS FIRST

AS WE go to press the prospect of creating our national army upon the principle of selective conscription recommended by the Administration is doubtful. In any event, however, it will be possible to train our officers on sound lines. The recruitment of

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officers must be on a volunteer basis, but the basis of selection will make all the difference.

No single thing is more fraught with possibilities of disaster than the volunteer untrained officer. In the War of the Revolution any citizen who could raise a company of fifty-nine men became a captain. Similarly, any one who could combine ten such companies into a regiment was commissioned colonel. Consequently, the sole test of leadership was the ability to recruit men.

While, happily, we have progressed since those days, there is grave danger that, should our first citizen army be raised through a call for volunteers, local units would be recruited and offered for service by untried and untested leaders. The danger is enhanced by the fact that our people are still comparatively uninformed as to things military and are inappreciative of the special knowledge and exacting training required for leadership in modern war. To send untrained troops into the field is manslaughter, but to despatch troops with untrained leaders is murder in the first degree.

Before the first increment of the national army is raised, its prospective officers must be put through a stiff course of intensive training of at least three months' duration. Training camps for this purpose should be established without delay. The Regular Army and the National Guard will not be able to spare many trained officers, since they will be needed to train the recruits required to bring these forces to war strength. No man should be commissioned in the national army who has not earned his advancement through a stern, efficient test. The day of the untrained officer is past. Zeal alone is not enough without proved capacity for leadership.

THE ARMY BILL

IT HAS been too much assumed that the Administration bill calls for an army of conscripts. That is the cry of the volunteer army advocates, but it is only a half truth.

The fact is that more than 500,000 volunteers would be required under the bill. The official figures published by the War Department on April 12th were as follows:

REGULAR ARMY, exclusive of Philippine scouts:

At war strength,	293,000
Present strength,	131,481
Volunteers required,	161,519

NATIONAL GUARD, including only units now organized:

At war strength,	329,954
Present strength,	123,605
Volunteers required,	206,349

ADDITIONAL:

To replace 150,000 officers and men withdrawn from above force as training personnel for first 500,000 selective conscripts, 150,000. Total number of volunteers for war service only, 517,868. In addition to these figures, the discharge from the Regular Army and National Guard of men with dependent relatives and for other causes will create additional vacancies which will be filled by volunteers.

The opposition to the Army bill has really been opposition to effective military participation in the war. No one believes that more than 500,000 men can be secured for the army on the voluntary principle without disrupting the life of the Nation.

Beginning with the current number the Training Camps Supplement merges with NATIONAL SERVICE. Captain Ralph M. Parker's Notes will appear each month in NATIONAL SERVICE.

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ORGANIZATION *and* TRAINING *of the* SWISS ARMY

AN EXAMPLE FOR THE UNITED STATES

By THEODORE A. CHRISTEN

Former Officer of the Swiss Army; former Member Ohio National Guard

IN THE summer of the year 1887, in the barracks of the beautiful town of Lucerne, it was my privilege as a Swiss youth of twenty to receive my first military training in our national army. I was one of eight hundred young hopefuls of the same age but of varying degrees of intellectual receptiveness and physical pliability, ranging from the university student down to the honest and genuine awkwardness of the farm hand or the journeyman cobbler from the remote back country up between the mountain ranges.

Housed in the barrack dormitories, the thirty-five of us in our particular room were under the orders of Corporal G——, in civilian life a journeyman barber. In the same room with me were two other students from my university, one of whom was "Romeo," handsome, quick of tongue, high-strung. "Romeo's" father was a man of distinction and high rank in the army, at the time commander of the brigade of infantry of the territorial military district in which Lucerne is situated. We were all subject to exactly the same discipline. Each man had his duty in the so-called "internal service," to keep order and peace in the room, to see that it was perfectly clean, each one to make his own bed properly, and always to be ready to fall in spick and span. It was the duty of our corporal to see that we kept up to the mark.

On the day that word was received that the commander of the brigade, Recruit "Romeo's" father, would come to make inspection, scrubbing of rooms and corridors was going on. "Romeo" had to do the corridor; he did not do it very well and was told to do it over again. Unlucky "Romeo," who had kept his somewhat unruly tongue under control all along, forgot himself just enough to say that he had already done it once. The corporal had to report him for punishment for "replying" and poor "Romeo" got twenty-four hours in the guard-house on inspection day. Imagine the dismay of the rest of us! When the commander of the brigade arrived he asked in his short, yet kind, way: "Where's Romeo?" We answered: "In the guard-house." "What has he done?" "He has replied." "Serves him right!" And off he went. This is a little indication of the spirit of discipline and of democratic equality that exist in the Swiss army.

THE MOBILIZATION OF THE SWISS ARMY

In the present condition of the United States, I can do no better service than to tell what another people of similar institutions, where love of liberty and self-government are not less developed, has done, and how its military institutions have stood the test of emergency. I speak of

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Switzerland, my native country, in whose army I had the honor to serve, first as a private, later as an officer, and I have since served in the National Guard in the State of Ohio, and have thus had exceptional opportunities to compare the two systems of military training.

A great deal of misinformation exists in this country regarding the character and workings of the Swiss system of military training and organization. I shall hope to nullify some of this misinformation in the course of my explanation, especially with regard to the relations between the central federal government and the cantons, which correspond to our states. This matter has a direct bearing upon our problem of the National Guard. It is needless to recount the events which led up to the Great War. Assuming that all my readers know these, I plunge at once into my subject.

Austria's ultimatum was sent to Serbia on July 23, 1914. Within a week events had shaped themselves in such a way that a catastrophe seemed inevitable. The Government of the Swiss Republic, watchful and aware of the difficulty—possibly forewarned by one of the governments which knew how events were headed—decided to act.

On Friday, July 31st, a "general warning" was issued. This warning meant that no member of the army was allowed to leave the country; no horse or mule was to change ownership or place of stabling. The list of horses and mules, which the mayors of cities, townships, and villages are compelled to keep, was to be revised and brought up to date. At the same time the "last line" troops (*Landsturm*), which were only locally organized in small units, and the youths of seventeen to nineteen years of age who had undergone preliminary training with the rifle, were at once called out to do guard duty on railroad bridges, tunnels, stations, and roads so as to allow the troops of the first and second lines (*Élite* and *Landwehr*) to go to the assembling places of their units without leaving unguarded these all-important lines of transportation and communication. They acted as "cover troops."

On the first of August the Government decided to call out the entire armed strength of the nation for Monday, August 3d, at nine o'clock in the morning; that is to say, mobilization was proclaimed and every man from twenty up to forty-eight, who had ever had military training, was called to the colors. The Government assumed full control of all the railroads and turned their operation over to the railroad department of the General Staff.

The first of August is the Swiss national holiday, in commemoration of that time long ago when, in 1291, the first alliance between the original three mountain cantons for the mutual defense of their liberties was concluded. On that fateful day of August, 1914, the church bells were rung, not as in peaceful times to ask the people to think gratefully of their brave and hardy ancestors, but to demand from the living generation the supreme sacrifice for the country's honor and independence.

On Sunday, August 2d, the railroads were still open for civilian travel. All the soldiers and officers who lived away from their troops' assembling districts returned to their homes. Everybody settled his affairs as best he could, prepared his arms and uniforms which, by the Swiss custom, are kept at home by each soldier, and procured one day's ration of food and provender for his horse. The

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assembling places for troops were meanwhile made ready by the so-called *commandants de place*, usually higher officers retired from field duty. These officers assign quarters, take over stables and barns, examine horses and wagons, provide fire and police protection, look after drinking water, straw, and other prime necessaries, provide infirmaries, guard-houses, and in short everything that is necessary for mobilization.

On Monday, August 3d, everybody who had had military training went to his post. From lists kept ready all along, the roll was called; medical inspection was made, and after a few hours' work without confusion each separate unit started out to join the larger unit to which it belonged. Each man came provided with two pairs of regulation shoes of his own. Horses and wagons, motor trucks and automobiles, already registered for just such an emergency as this, were brought out, examined by committees of experts, and turned over to the mobilization commanders. The supernumerary horses went into horse depots for remounts under the care of *Landsturm* cavalrymen. The supernumerary men were organized into companies and sent to the rear as reserves. These preliminary details having been attended to, the *commandants de place* turned over the command of the assembled units to their proper field officers, and concentration into brigades and divisions began on the same day. Not only were the units trained, equipped, and officered, but they were complete in every respect. All the necessary property wagons, harness, pack saddles, kitchens on wheels, telephone apparatus, spades, picks, saws and axes, medical supplies, maps, and, not least, ammunition—170,000 rifle cartridges for each battalion—all was ready, stored and assembled for each regiment at the regimental storehouse. Nothing had to be ordered "from Washington;" nothing had to be sent from a Swiss equivalent of a "Rock Island Arsenal"; it was in place where it would be needed. The draught horses alone had to be requisitioned. These had been listed as before mentioned. They were called for, hitched up, and at once driven before the wagons. The cavalry of the first line appeared at the mobilization places not only armed and equipped but provided with horses, for the Swiss Government entrusts each cavalryman with a horse, which he takes home with him after recruit service, and which he keeps in his own stable, the only men eligible for the cavalry being those who have facilities for keeping and properly caring for a valuable government horse. The cavalry is at all times ready in the fullest meaning of the word. Each man has a regular cavalry horse that has done cavalry service, (officers have two), trained to "shot and shell," and not needing breaking in.[1]

On Tuesday, August 4th, transportation and concentration continued. The Federal Assembly had met for the election of the Commander-in-Chief, and the army corps commander, U. Wille, was elected. The Federal Assembly ordered the Government to declare Switzerland's intention to remain neutral and her firm will to defend the neutrality and inviolability of her national domain from attack. It also gave directions that the governments of all nations should be informed of this decision and gave the Swiss Government full power

[1] It is not quite fair to compare the mobilization of our state militia cavalry under federal control in the United States in 1916 with this Swiss mobilization. But it is nevertheless a fact that some of the cavalrymen called out in the middle of June, 1916, did not receive mounts until the middle of September; that is, they became cavalry only three months after mobilization.

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"for the maintenance of the integrity and neutrality of the country, its credit and economic interests, and especially the safeguarding of the food supply of the nation," voting at the same time unlimited credit, subject to accounting after the war. General Wille and the Chief of the General Staff took over the command of the army.

On Wednesday, August 5th, the troops already on the frontiers took the oath of war and solemnly swore to defend the country with their lives and bodies. Preparations to put the frontiers and the country in a thorough state of defense, which were begun on the day before, were continued; trenches were dug, observation towers built, roads widened, obstacles to the defense removed—at one place even a forest had to be cut down—all this on plans and orders long before prepared. Since then certain positions strategically important have been converted into formidable field fortifications of a modern type to stop an invader on his way into the heart of the country. The border has been constantly patrolled and closely guarded. Not even the proverbial "cat" could pass the frontier without being stopped, and the only breach of neutrality committed by the belligerents was in the air. A few airplanes flew over Swiss territory by mistake—one even dropping a few bombs in a peaceful town, mistaken for a place in France—but in each case formal apology was asked by the Swiss Government and immediately and formally rendered by the offenders' government, whether imperial, royal or republican. Neutrality, strongly armed and ready, commanded respect.

The mobilization was a complete success. Within forty-eight hours the full strength of the country had been assembled and concentrated with all the reserves, all the equipment, all the horses, up to the full number of 300,000 men. Three hundred thousand men—that is, 9 per cent. of the population—trained and equipped to defend so small a country as Switzerland, represent a force with which even the strongest military Power has to reckon; and one must not consider merely that there were 300,000 men only but that this force was divided into a number of armies, each complete in itself, with equipment, tools, etc., in the hands of a commander, mobile and available for immediate use anywhere against a similarly organized enemy.

Complete mobilizations are always an experiment; they can never even be attempted in peace time, for they upset the economic and social life of a nation. They belong to war. Blunders and losses due to a slow and unsuccessful mobilization are sometimes irretrievable in spite of the courage of the troops and their leaders. Mobilization is the supreme test not only of a branch of the government or of the whole government but of the nation itself. It reveals the strength of the nation not only in its manhood resources but in the spirit that animates its life. *It is the test of intelligence applied to the lessons of history.* It is also a test of the character of the people as revealed by the acts of their legislators. It takes a strong legislator to demand sacrifices for problematical future emergencies and a strong constituency to be not only willing to make it but even to insist upon it; to make it part and parcel of

[1]Three hundred thousand is a conservative estimate. The men on furlough in foreign countries who were called to arms, and of whom thousands responded to the call of the country, are not carried on ordinary lists. Some observers on the spot estimate the number at 425,000 or even more. Official figures of the War Department will not be available until after the war. The total population of the country in 1912 was about 3,830,000. Of this number over 500,000 were unnaturalized foreigners from whom no military service can be asked, so that 3,300,000 is the total number of citizens from whom recruiting is possible.

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the national effort in its daily life. I think I am justified in saying that in the successful mobilization of its army the Swiss people have stood the test.

HISTORY AND TRADITIONS OF THE SWISS MILITARY INSTITUTION

The mobilization, in such a short time, of forces relatively enormous, including as they do men of all ages up to forty-eight years, is possible only where a system of army organization has existed for a long time. It will not be necessary here to tell the story of Swiss independence, beginning in that celebrated agreement of August 1, 1291, between the men of the small cantons of Uri, Schwyz, and Unterwalden. But it is to be observed that even in these early times universal service was the root principle of Swiss preparedness. Without it the principle of democratic equality of rights and its corollary, equal duties to meet danger from without, would not have been possible. Whoever in Switzerland cannot serve in the army must pay a tax; in those bygone days even nuns, and widows who could send no male defender from their own fireside, had to pay it. Whoever shirks his military duty is declared "devoid of honor and perjured."

In earlier days Switzerland made the mistake of having cantonal armies, corresponding to our state militia, which were perfectly independent in military matters. However, history shows a steady tendency toward federalization of these forces. In 1798, during the wars of the young French Republic, two French armies invaded the country; one coming from the west, the other from the north. There was a lack of unity in the cantonal armies; valuable time was lost. Some of the cantons deliberated on the advisability of helping, while the enemy was on his way to the heart of the country. The Swiss forces in the field offered heroic resistance as always, but they were scattered and too small to resist successfully. The victorious French armies effected a junction and the downfall of the defense took place. After this, Switzerland was partly disrupted and untold suffering and humiliation was her lot. Army after army marched through and fought over the land, the French under Masséna, the Russians under Suvarov, and so damaging were the Austrians' raids that the farmers had not even enough grain for seed. Famine and epidemic ravaged the land.

In 1814 the emperors of Russia and Austria and the King of Prussia passed through to France. There were starving war orphans as numerous then in Switzerland as now in Belgium. The official requisitions alone levied from the people during the years 1798 to 1815 totalled $300,000,000, which, considering the number of inhabitants and the greater value of money at the time, would be the equivalent of over $400 per head of the population to-day. For the population of the United States a similar proportion would require from 40 to 50 billion dollars, and the reason why Switzerland was thus ravaged was not its inability to resist or the insufficiency of forces but merely the control of the army by the different cantons. This is what "state control" did for the Swiss. Since that time federal control has become more and more developed. The army organization laws of 1817 and 1850 culminated in the laws of 1874 and 1907. Cantonal or local control practically ceased. One of the original traditions of Swiss military institutions, locally controlled forces, had to yield, but, as the event has shown, in the interest of national safety.

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Switzerland has had to take into account in planning for an army of defense the military strength and resources of her four neighbors, together with their character as revealed in past history and present national aims, and also their armaments and preparedness for immediate action through standing armies. She has to take into account, also, the political character of her own organization, the extreme independence of her citizenry, and last, but by no means least, the small size of the country and her limited resources in men and money. The army system which has been evolved stands for certain principles which I may briefly enumerate:

(1) As large an army as possible in proportion to the population, through universal obligatory service.

(2) Speediest possible mobilization through complete organization in time of peace into modern army units of the largest type, fully officered and equipped, and territorial formation of the units.

(3) Thorough training in as short a time as possible, having in view the financial resources of the nation and the willingness of the nation to exact personal sacrifices from her citizens.

(4) Marshaling of all the forces of the nation to supplement the work of the army.

As the result of this a system has been thought out and put into practice that conforms closely with the traditions, resources, and needs of the nation. It is strikingly different from other military systems in Europe. Observe that there is no standing army; that the time for training of soldiers is very short; that nearly all officers are non-professional in their relation to the army, since after periodical service they return to civil life and civilian occupations. Moreover, they are obliged to accept promotion to a higher degree and to make additional sacrifices. The army administration alone is permanent and professional.

So much has been written recently on the subject of the Swiss system that it hardly seems necessary to go into great detail regarding the amount and time of service. I will make this as brief as possible and then go on to the more important matter of the spirit in which such service is taken up.

In the year that he reaches the age of nineteen the young Swiss goes to the local roll keeper—usually the notary or the village schoolmaster, or somebody else handy with the pen—and is inscribed on the roll. He gets a page in the ledger of the district and a personal service book. Later in the year, between July and October, he is examined for fitness. He has to appear before a committee of recruiting officers and medical men on a date long before made known to him. The tests he has to undergo are mental, physical, and medical. He has to solve problems in arithmetic; answer questions on Swiss history and institutions; pass an examination in reading and composition—to establish his intellectual and cultural rating; he is tested for jumping, for running more than ninety yards, and for dumb-bell lifting to test his physical condition, and is submitted to a careful scientific medical examination. The verdict of the examiners may be that he is declared fit at once; or he may be ordered to appear again for examination in one or two years when his development, chiefly chest development, may have sufficiently improved to make him fit. He may be pronounced fit, if not for the actual army, at least for the so-called auxiliary services; or he may be declared unfit for any service.

In 1910 there were examined:

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Recruits presenting themselves before their 19th year[1]	865	of whom	754	(87.2 per cent.)	were immediately declared fit
Recruits of 1910 of 19 years (born 1891)	27,655	of whom	18,050	(65.2 per cent.)	were immediately declared fit
Total examined for the first time	28,520	of whom	18,804	(65.9 per cent.)	were immediately declared fit
In addition to these were examined recruits having been remanded from previous years:	4,796	of whom	2,298	(47.9 per cent.)	were declared fit
Examined in 1910, total recruits	33,316	of whom	21,102	(63.4 per cent.)	were declared fit

Of this total number of 33,316 examined, 21,102, or 63.4 per cent., were declared fit at once; 3,784, or 11.4 per cent., were remanded for further examination; 5,969, or 17.9 per cent., were declared liable to auxiliary service; and 2,461, or 7.4 per cent., were totally unfit.

During the present war the re-examination of those once declared unfit has revealed the fact that many have improved in health and strength sufficiently to make them available for active service.

The recruiting day is a most important one in the life of the young Swiss. He looks forward to it eagerly and his one hope is that he may be able to fulfil the requirements. There is a certain stigma attached to rejection, and he would feel that forever after he would have to give explanations for not being a soldier. Very likely his father, his uncles, and his brothers are or have been in the army, and most of his friends and schoolmates will be there, too, and this is one thing in which he wants especially to be their equal. To be rejected is almost like being "black-balled," for the door will be closed to some of the opportunities of life wherein honor and ambition are usually satisfied. When the Swiss boy looks forward to his nineteenth year, however, his mind is filled with something besides the selfish satisfaction which comes from realizing that his own ambitions are about to be gratified. There is a feeling that he is doing that which is honorable in the eyes of his fellows: he is joining with them in a duty which they must perform together; he is having his first practical training in patriotism. His friends and family likewise have their share in the event, for future duties and position in the community depend largely upon the outcome of the examination for fitness in the army. If he has been accepted, the recruit is at once assigned to one of the arms of the service—that one to which he is best adapted physically, mentally, and professionally—but the needs of the army must prevail. Naturally, the great majority must go to the infantry. Medical students are all assigned to the medical arm; so, also, are members of religious sects whose tenets forbid the use of weapons. Saddlers and men familiar with horses go to the horse services; bakers and butchers to the commissary, etc. This assignment is at once inscribed in the lists, and also in the man's "service book," together with the name of his company, troop, or battery, to which from now on he belongs. Assignments are made as the different units of his particular district require. Finally, the youth is told that he will be called for recruit service the following year, and he is then dismissed with the admonition

[1] Young men who wish to enter the army before their legal time may present themselves; they have to have a written permit from their father or guardian.

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not to give way on his return home to too noisy expressions of joy. This advice is based upon experience, for on the late afternoon and evening of the enlistment day the usually quiet countryside rings and echoes with the singing of these happy "conscripts," and the country village which on other days goes to sleep after sunset on that night stays up late to help the young men celebrate their admission to the ranks of those who from now on have the free citizen's right to receive training for the defense of the country.

At the age of twenty the first real training occurs. Sufficient numbers of the young men of a divisional district are called to the divisional training barracks to organize a full infantry battalion. This is of great importance. The recruit finds himself at once in a big smoothly-running machine of which he is a small but active integral part. It is completely organized. The daily life and its routine is army life, and he at once gets an idea of what there is to be done in a military unit and how each one has his superior to whom he is responsible. The training lasts different lengths of time for different arms of the service: for the infantry 65 days, cavalry 90 days, artillery 75 days, medical corps 60 days, but to this must be added two days in each case—allowance for going to and returning from place of assembly. The training is thorough and energetic. It accomplishes in a minimum of time a maximum of results. The men are not there for play but to receive as much training as possible in the limited time. The reproach made against the standing professional army of the United States—that the soldier's life is one of deadly tedium for lack of sufficient occupation—certainly does not apply to the Swiss soldier or recruit. His time is so fully occupied that he has none for thoughts of desertion, a thing unknown in Switzerland, and when he leaves the service he has gone through a school of training that leaves him no time to acquire habits of loafing. Concentration on the subject in hand is essential and superficiality is shunned. But it must not be supposed that the work is all formal drill. Some of his preparation is of a kind to force him to think, decide, and act for himself as circumstances and conditions may require of him. For mere drill pedantic accuracy is required. For the higher function there must be an appeal to the intellect and to individual initiative.

His immediate instructors are all young officers and sub-officers, men but a few years older than the recruits, who are free from the ingrown pedantry and routine of the professional training sergeant. These young officers are for the first time handling men and instructing them and are full of the enthusiasm of their new calling. The training is practical and thoroughly up-to-date. Shooting, marching, outpost duty, entrenching and manœuvring, under day and night conditions, in squads, companies, and battalions, are practised together with drill gymnastics, and last, but important, discipline, that is, the virtue of cooperation with others for a common purpose singly or in masses. Discipline is a greater necessity in a free people than among those ruled by autocrats; the latter can be made to obey; a free people must be shown the need of discipline through understanding the purpose for which it is instituted. Discipline conserves strength, insures action instead of talk, lightens labor, and reduces friction. Moral training in soldierly honor and truthfulness is not less important than the acquisition of physical stamina and

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technical knowledge. This is training the recruit will take back with him into civilian life. He will also learn practical lessons in democracy. Class distinctions are abolished. All wear the same kind of clothing, live in the same rooms, eat the same food. The sons of the poor and of the wealthy are perhaps for the first time on an absolutely equal footing. There is no distinction made as to their ancestry or social standing; they are put into ranks according to height and not according to individual wishes or the whims of mutual attraction; their military superior may in civilian life be inferior, but while in military service honor and obedience are due him according to his rank. Their duties are the same. Neither knowledge nor prospective honors dispense them from any kind of work. As soon as the service is over the men return to civilian life and its distinctions of individual and social, economic, and cultural quality; but at least for a time they have seen and lived in conditions where all were equal and on the same standing with regard to duty and service. This military training has been the making of many men. Those who are overestimated at home will be found out. The bashful and the timid are forced to act; acquaintances are formed which establish men's standing and which help them live up to it. Those of us who have passed through this training feel that the young man who does not have to serve is to be pitied. We pity him because he has never had the experience that there are conditions under which his dear self is not of the slightest importance, and again other conditions under which responsibility for the whole rests upon his shoulders and his ability to do the right thing at the right moment.

One of the most important features of military training is to learn how to shoot and handle the rifle. Practice in shooting starts with recruit service and is followed up assiduously. As soon as the man knows his rifle he is taught to aim and shoot with blank cartridges. After this he is taught as an individual to shoot with ball cartridges at targets 300 to 400 metres distant. When he has attained the required proficiency he is made to shoot at dummy figures, sometimes at known distances and sometimes at unknown. This completes individual shooting. Then follows mass shooting in squads and companies at known and unknown distances in the form of a running fight against dummy targets representing an enemy. For this important training two hundred cartridges per man are allowed. This completes the recruit service for the soldier.

REPEAT SERVICE AND MANŒUVRES

The young man's duties as a defender of the nation are not, however, over. From now on until he is twenty-seven he serves eleven days each year plus one day each for coming and going, with the unit in which he was enrolled at the time of physical examination, either in the so-called repeat service or in the manœuvres. Adding this time to the sixty-five days' training in the infantry, we have a total amount of time of 142 days devoted to infantry training in the first line, and extending over a period of eight years. The repeat service takes place in smaller units—regiments and brigades; the manœuvres in the larger ones, divisions and army corps. In the repeat service shooting and training play a large part. The organization which he enters is completely formed. The "cadres," that is, officers and sub-officers, are in their places and every one of them has led his command

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before. This complete organization not only absorbs him but it also gives him that assurance and self-confidence which are necessary to enable him to do his duty at once. This unit of his is a part of a higher unit, each equally officered and supplied with staffs and with all auxiliary services.

On alternate years there are regular manœuvres. These are in large units, as large as an army corps, and they are so warlike that only the shooting of actual bullets would be needed to bring about the dire reality of actual warfare. There are long marches, rainy nights are spent in deep trenches. There is outpost duty on high mountain passes, and the men carry heavy equipment on their shoulders and backs. These manœuvres furnish an opportunity to the commanders and to the administration and to the staff officers, as well as to the railroads, to be tested as to their efficiency and readiness. The army in manœuvres is supplied with bread furnished by the army bakeries erected at the base of supplies at the rear. The meat-cattle are slaughtered by army butchers and bread and meat are carried forward to the units on requisition wagons just as in war time. It is up to the staff and commissary officers of each unit to see that their supplies get there in time, for if they do not the troops have nothing to eat. Moving kitchens on wheels follow each unit. In villages occupied the soldiers take shelter in whatever building they need, and the medical corps establishes infirmaries and hospitals for the troops in the rear, just as if on the morrow a big battle were about to take place. There is nothing except actual war that is more soul-stirring than these manœuvres, and for the Swiss they are of the highest interest. Newspaper space is taxed by detailed descriptions, and the names of the commanding officers are known to every one.

Manœuvres serve still another purpose, namely, to acquaint the army with its possible future battle-ground. This is a subject which would require a separate article, but I may say that the manœuvres of the past have been of inestimable value in enabling the Swiss to know where to concentrate their forces in the present tremendous emergency. Manœuvres are calculated carefully, and the time and district made known early in the year, to enable the men and their employers to make suitable preparation for a thirteen days' absence from home and work, and to enable the farmers of the region to gather their crops, for the army in manœuvres has the legal right to trespass upon and use the fields, as need requires. The Government pays for any damage done, but not for crops that were left standing unnecessarily. Economic disadvantages are thus minimized. The men called out on each occasion are not the total population even of the army.

The repeat courses of the smaller units do not take place all at the same time. The men themselves sustain very slight loss, for it is against the law and a punishable offense for any employer to penalize his employee. The families of the needy which would suffer because of the absence of the bread-winner on military duty receive financial aid for this time. This aid is not to be classed as poor relief, and to accept it carries no stigma of shame. A very important point is that every member of the army during service is insured against accident and disease and the loss of time and earning capacity brought about by it. Everything is done to reduce to a minimum the actual sacrifice which men have to make.

These two services, the recruit course

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and the repeat and manœuvre service in the first line, and one single repeat or manœuvre course of eleven days in the *Landwehr* (ages from 32 to 40 years) comprise for the great mass of the people all that is required. Practically no one who is fit is exempt. However, there must be exemptions, for even in war time the business of the nation has to be carried on. These exemptions naturally cover certain government officials, also clergymen not serving as army chaplains, the highest medical and administrative directors and nurses of publicly conducted hospitals; all doing prison work or police duty of any sort; the customs frontier guard; and those officers and employees of the public transportation system who will be indispensable in war time.

The employees of the postal service have to serve their time in the first line only, those of the telegraph service in the first and second line usually as field telegraphers, but all these have to undergo full recruit training. Recruit service is thus the continuation-school of Swiss manhood, and the principle of universality—strict and without exception—is applied more thoroughly in Switzerland than anywhere else. Officers and sub-officers who have gone through bankruptcy are not called for further service. Their availability as commanders who must enjoy the full confidence of every one has come to an end. The practice of certain judges in the United States in suspending sentence on malefactors on condition that they enter the Army is absolutely unthinkable in Switzerland. Service in the army in Switzerland is an honor.

OFFICERING THE ARMY

Every army must have a body of officers and sub-officers. The French word for this is *cadre*, which means a "frame." Without a framework no organization, no machine, is thinkable. Officers and sub-officers are of different degrees of military training and cultural antecedents. The officers represent the education, intelligence, and energy of the nation, and they have to prove at every step fitness to hold their positions. They are watched by their superiors and observed by their men; they "have to make good." The army problem is not that of the simple soldier, who is always brave whether he be "Tommy Atkins," "Fritz," "Jean Jacques," "Mohammed," "Ivan," or "Togo." The army problem is to train officers who will be capable of handling these brave men. Switzerland has solved this problem by compelling every one to serve in the ranks and rise through the different grades without skipping. There is no aristocratic corps of officers that has had its training away from the ranks in some secluded officers' college like West Point, St. Cyr, or Sandhurst, nor any promotion of men from civil life, for political reasons, to be officers. The recruits are observed and rated from the first day they enter service, and those who show requisite qualities of alertness, interest, personality, and executive ability are soon marked, and even as recruits they are occasionally asked to give a simple command, explain a movement, or lead a group. If they are considered good material they are asked to "aspire" to become sub-officers and officers. An investigation is then made as to their civil condition and consequent availability to become officers. As the duties of the grade of officer entail considerable sacrifice in money and especially in time, no one is asked to assume the burden whose shoulders are not broad enough to carry it. Money plays no considerable part here. The tradition of

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the forefathers makes it almost obligatory for the educated and professional classes to become officers, but emphasis is laid upon fitness first of all. All kinds and conditions of men become officers. For instance, one commander of a regiment of mountain infantry of the first line[1] is a school teacher. Many lawyers are officers, even clergymen—although they would be exempt from further service after graduation and ordination. Recently one of these theologians passed his examination and preached his graduation sermon in the uniform of a lieutenant of infantry. Sub-officers include all classes —artisans, farmers, teamsters, even highly educated men whose chief talents are other than military.

The career for higher degrees begins with a special training course for corporals—twenty days for the infantry, thirty-five for the cavalry, artillery and engineers. From this the young corporal goes to a training course for recruits and becomes instructor of raw recruits for sixty-five days. He learns the practical handling of men at once. Swiss army life is not plagued with examinations. The actual performance alone is judged. The training course for lieutenants (proceeding from the corporal's position) lasts eighty days in the infantry and cavalry and 105 days in the artillery and engineer corps. In this course he studies army organization, map reading, commanding, hygiene, and various aspects of technical military knowledge. The young lieutenant then takes charge in a recruit course as instructor and becomes proficient in the handling of men. The sciences and mathematics do not enter into their studies except in so far as they are necessary for practical purposes. He is not "over-trained." The leading men in the Swiss army have concluded after the experience of this mobilization and the long service at the frontiers that the theoretical training of the young officers is sufficient. What is needed is still more service with the men, not away from them.

The young lieutenant, after a total of 241 days of instruction of the most intensive kind, is assigned to troops, preferably his home regiment. With this unit he attends repeat service and manœuvres. He must serve as a second lieutenant for four years before he may advance to the degree of first lieutenant. One of the conditions for advancement is to attend a shooting course for eighteen days, where practical direction of fire, estimation of distances, and scientific entrenching are repeated and still more thoroughly implanted and inculcated. Another similar course of training fits him to become a captain after another four years. *No one can attain a higher degree without having passed through service in the lower and having suitably qualified for the higher.* In the course of time he may, if capable, become a major, commanding a battalion, a lieutenant-colonel, commanding a regiment, and a colonel, commanding a brigade. Each of these units he is to lead in at least four repeat services or manœuvres. He may be required to attend Central School and General Staff courses. He may even be attached to the General Staff. *Between his periods of service he always returns to civilian life and occupations, just as his sub-officers and simple soldiers do; only more frequent and longer periods of service and higher requirements distinguish his duties from those of the rest.* It is only when he reaches the highest degrees that he must devote all his time to military matters and leave his civilian occupation al-

[1] A Swiss mountain regiment counts about 105 officers, 2,900 men, 45 riding, 76 draught and 209 pack horses, and 38 wagons.

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together; for the development of scientific warfare has been so great that the leaders of even the most democratic army must be experts. It must not be thought, however, that this promotion pursues a purely mechanical routine. Not every lieutenant can become a general. "Weeding out" is going on all the time. The great number of aspirants permits of a severe selective process. Those who are not developing well may be changed from the first line to the second or third. This is not always because of incapacity but sometimes to make room for others who may prove to be as good or better. In this way there are for most commands more than one man capable of filling it. There is thus a reserve of all degrees of officers ready to fill important positions, and the importance of reserve officers has been demonstrated over and over again in this present war.

In addition to the non-professional soldiers, a few persons pursue soldiering as a career. These are carefully selected, thoroughly trained, and put on probation for three years before they are accepted. They must have a certificate of admission to a university and afterwards must study at the military department of the Polytechnic School at Zurich; they receive commands and advance in units like the rest. Their number in 1915 was only 189. In all other armies than the Swiss the professional is the prevalent type of officer.

The Swiss system, then, provides universal military training and service for every citizen physically fit. Every one must start in the ranks; every one capable of becoming an officer, and to whom it will be no serious hardship to become an officer, must advance through all the different grades. Neither social standing nor wealth nor anything else prevents the Swiss from both the privilege and the responsibility of service. There is a minimum of professionalism, a maximum of democratic efficiency. There is no militarism in Switzerland.

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MILITARY TRAINING *at* CORNELL UNIVERSITY

By JACOB GOULD SCHURMAN
(*President of Cornell University*)

THE great European War has opened the eyes of the American people to the importance of military training. As President of Cornell University I have been for twenty-five years the official head of a Department of Military Science and Tactics, officered by the Federal Government, which has given military training to successive classes of undergraduates. I am familiar not only with the idea and practice of military training, but also with the compulsory requirement —the military work at Cornell being required of all freshmen and sophomores.

My own feeling and attitude toward the department may be gathered from the following extract from my annual report for the year 1914-15:

> No department is of more practical importance to the University, to the undergraduates themselves, or to the Nation than the Military Department. It is gratifying to report that none is more effective or enjoys a higher reputation.

I am a firm believer in the intrinsic value of military training even apart from its utility to the public in time of war. Military training teaches the young man how to stand and walk and hold himself; it gives him vigorous out-of-door exercise so that gradually his chest expands and his muscles grow firm; it inures him to physical hardships; it disciplines him in orderliness, punctuality, accuracy, and alertness; it endows the senses and the intellect with quickness, precision, and the habit of concentrated attention; it develops self-control as well as obedience to proper authority and resistance to improper; it accustoms the individual to coöperation and team-work, while fostering comradeship, thus facilitating community life and lubricating social intercourse; and it prepares youth for better citizenship by constantly emphasizing the conceptions of duty and service.

If wars were banished from our planet I would retain military training side by side with athletics as an instrument of physical education in our universities; and not only for its physical advantages, great as they are, but also for its moral, mental, social, and civic effects and reactions.

Before the outbreak of the European War set the American people thinking of military preparedness, Cornell University had secured from the State of New York an appropriation of $350,000 for a new and capacious armory. To the best of my knowledge, no other university in America has such adequate facilities for indoor drill. The foresight of the university authorities in planning and securing the building has been strikingly justified by the march of events, national and international.

A Commandant is detailed by the War Department. And since the century opened we have had a series

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of unusually able officers. Under the recent legislation of Congress the staff is not limited to one officer as formerly. At the present time we have Captain Charles F. Thompson, Commandant, Captain George R. Harrison, and eleven first sergeants and sergeants detailed as assistants to the Commandant. Under these officers sent by the War Department the cadet corps is organized under student officers, many of whom have had military training in their preparatory schools, and all of whom have had at least two years' military training in the University.

The work of the department is maintained at comparatively little cost to the State and Nation. The National Government details the officers and it also furnishes the military equipment. It is expected that the State of New York will provide, by a small annual appropriation, for the maintenance of the new armory or Drill Hall. The University itself has been generous in supporting the Military Department; it pays the student officers of the cadet corps, it supplements the pay of the federal officers, and it votes funds for military supplies and other departmental purposes. These appropriations from the University have aggregated annually about $10,000, and for the current year they are over $11,000.

The number of undergraduates enrolled in the Military Department during the past term was 2,067. Of this number only 87 were relieved from the obligation to take the military training —45 being excused for physical disability, and 42 as aliens.

The preceding statement shows that Cornell University was in a thorough condition of military preparedness before the nation-wide movement in favor of it began. As in the latter part of the nineteenth century the University anticipated the needs of American manufacturing and transportation by its schools of applied science and engineering, and as in the beginning of the twentieth century it met the pressure of new conditions on the farmers and allied producers by the establishment of a State College of Agriculture, so it had long been awake to the necessity of national defense, and, with no support from public opinion, it put into practice in the academic community and recognized it as an important concomitant of general and professional education that system of required universal military training which statesmen and generals are today holding up as a theoretical ideal and practical necessity for the Nation. In this work Cornell and similar universities have been rendering the Nation a very important and distinctive military service. However large the Regular Army, the defense of the country in time of war calls for a great citizen army. But officers for such an army cannot be improvised. It is the aim of Cornell University to give undergraduates military training enough to qualify them to become lieutenants. And the annual inspections of the War Department show that this task is being accomplished successfully.

No doubt, Cornell University like other universities felt a quickening of interest in military matters in consequence of the European War and the ever increasing liability of our own country of being involved in it. These conditions have led to the establishment of military departments in colleges and universities which have hitherto made no provision for military training. These new departures have been the occasion of much newspaper publicity. At Cornell University, on the other hand, where military training goes on as usual, the reporters have not found any items of particular news

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value. Military training is such a customary and established institution here that the fact is no longer reported by the newspapers as a novelty.

Military drill is treated like any other university subject. Deductions from the term mark are made for each absence, for being late, and for breach of discipline, according to the gravity of the offense; and 60 per cent. is required as a passing mark. As proof that rules are enforced, I cite the fact that over 5 per cent. of the underclassmen enrolled received failures for the past term, and these men must repeat the work if they are to receive their degree. All reports for failure to respect the prescribed rules are made by student officers. Such officers of the rank of captain and higher are given faculty rating as assistants.

Students are organized into a band, machine-gun platoon, detachment of medical troops, and sixteen companies of infantry, one of which specializes in engineering and another in signal corps training. Up to the present date only a unit for training reserve officers of infantry has been established, but application has been made to maintain in addition training corps units for both reserve engineer and signal corps officers. The Adjutant General of the Army has intimated that such additional units will be established as soon as the necessary Regular Army officers are available to take charge of the instruction.

The work of the Military Department consists of either practical or theoretical instruction to organizations for three hours each week. The student non-commissioned officers voluntarily attend schools held by their respective company commanders to prepare them to fulfil the functions of their grades. Student officers attend lecture courses on military tactics, and they also come to social meetings, which are held for the purpose of promoting interchange of ideas between them and the Regular Army officers detailed as professors of military science and tactics.

The theoretical instruction has included the same subjects during the past three years, namely: our military policy; value of military training; our military history; laws of war; organization of the Army; theory and functions of the various arms; theory of rifle practice; patrols, advance, rear, and flank guards; combat; outposts; field problems and manœuvres; military engineering; military discipline; courtesy, and customs of the service; military map reading; service of supply; guard duty, conduct of sentinels on outpost; camp sanitation, personal hygiene, and first aid to the injured; and summer camps. As far as possible the applicatory system has been inaugurated whereby situations and problems illustrative of the subject matter of the lecture are solved on large-scale maps or by diagrams.

The practical instruction consists of infantry drill and ceremonies to include organizations as large as the regiment; preparation for rifle firing; firing on indoor range; firing on outdoor range; tent pitching; bayonet exercise and fencing; calisthenics; signalling by flag, buzzers, radio, and heliograph; exercises involving use of cover; patrolling; advance, rear, and flank guards; outposts, attack and defense; marches; exercises in fire control and direction; first aid to injured; map reading; map making; building temporary bridges in model and actual sizes; and construction of model intrenchments and revetments on the sand table.

A new outdoor range has just been completed. It is not far from the campus; is equipped with twelve targets, and has firing points at 200, 300,

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and 500 yards. Each student is required to fire a course consisting of slow fire at 300 and 500 yards, and rapid fire at 200 and 300 yards. The university provides medals for those who attain certain specified totals in this course of firing. Shooting is, of course, the essential business of the soldier, and during the past year more men were enrolled in rifle practice and better scores made than ever before.

The above-mentioned target range, and sufficient field equipment for a full strength battalion, were provided through the generosity of Mr. Willard D. Straight, an alumnus and trustee who has been profoundly interested in the work of military training at Cornell University. This equipment makes it possible to arrange week-end marches and camps. Already equipment, which consists of blankets, ponchos, tents, field ranges, auto trucks, etc., has been engaged for almost every Saturday of this spring. About three hundred sophomores volunteered for a march held on April 21st.

Interest is maintained by means of competitions as far as practicable. The most elaborate of these is held in the spring, when all companies take a prescribed course of training for one month and are marked on each performance. The winning company is announced at the end of the period and its members provided with a suitable souvenir. There are medals and prizes offered for the best drilled student, the freshman making the highest score on the outdoor range, the student irrespective of class who makes the highest score on the outdoor range, and the members of the winning team in the inter-company match on the indoor range.

The War Department has continued to show the greatest interest in the military work of the University and to aid it by wise advice and practical assistance, with a liberal extension of all facilities at their disposal. For three years in succession Captain Schindel of the General Staff has inspected the corps with great detail and thoroughness on behalf of the War Department; and it is a great satisfaction to report that he has been able to compliment the institution on the good results achieved. In 1916, as in the two preceding years, the War Department included Cornell University in the list of the ten "distinguished colleges" selected for excellence in military training from among those throughout the United States at which officers of the Regular Army are detailed. This continuous distinction entitled the university to an issue by the War Department for the use of the cadets of U. S. Rifles, cal. 30, model 1903, being the Springfield rifles now supplied to the regular troops, and this issue was made at the beginning of the present year.

Captain Schindel's inspection last spring was made on the two afternoons of May 5th and 6th. His report to the War Department states that at Cornell University the military spirit is developed and nurtured "to an extent not otherwise to be found in colleges of this size," that military duty is performed "with the highest zeal on the part of the students," that the military instruction is "of such an extent and thoroughness as to qualify the average graduate for a commission as a lieutenant of volunteers," and that "the great stimulation of interest among all persons at the University is most marked, and the prospects for a brilliant future for the work of the cadet corps are assured."

To students at Cornell and elsewhere the call for military service has now come. But even before President Wilson on April 2d recommended to Congress the recognition of a state of

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war, the Faculty of Cornell University, anticipating that outcome, had, in one of the largest meetings ever held (on March 28th), passed unanimously the following resolutions:

Resolved, that the University Faculty advises that the several faculties recommend for graduation all members of the senior class in good standing who would normally graduate in June and who are enrolled, or who may enroll, in the land or naval forces of the state or Nation, and whose services require their absence from the university, or who, after approval by a committee of this Faculty, engage in industrial or other enterprises contributory to the efficiency or success of such forces.

Resolved, further, that the University Faculty recommends to the several faculties that all other students who fulfil the same conditions be given a leave of absence without prejudice.

Resolved, further, that the above provisions apply to those students who may become members of the American Ambulance Field Service on duty in Europe.

President Wilson recommends that Congress adopt legislation providing that adequate military forces for the present war be raised, not by appeal for volunteers, but by selective conscription. The students of Cornell University had anticipated an appeal for volunteers and many of them had already made up their minds to enlist even before the Faculty adopted the foregoing legislation. It is impossible to say at this writing how many of them would be called out for military service if President Wilson's recommendations are adopted by Congress.

There is, however, one point which the Government ought now to keep in mind. The object of the establishment of a military department in the land-grant colleges was to provide officers for the training of citizen soldiers in just such a great national emergency as has now overtaken us. President Wilson proposes an addition of 500,000 to our military forces, to be increased by successive increments as soon as the military authorities are in a position to train them. Where are the officers to come from for the training of these recruits? One source of supply will be the privates in the National Guard who served for six months or more on the Mexican border in the year 1916. A still more promising reservoir in my opinion are the graduates and undergraduates of the land-grant colleges and universities who have had the required military training. Cornell University has thousands of undergraduates and graduates to draw from. And as Cornell University is in the list of the ten "distinguished colleges" selected by the War Department for excellence in military training from among those institutions throughout the United States at which officers of the Regular Army are detailed, it would seem that Cornell and these other nine "distinguished" institutions should be immediately drawn upon by the War Department for a supply of officers to train the 500,000 raw recruits who will soon be called out for military service and also to train the additional increments that will follow them. I believe the response of the graduates and undergraduates of Cornell and similar institutions would be intensely sympathetic and patriotic and that their capacity for the training of citizen soldiers would be a revelation and a surprise as it would certainly be an encouragement to the country.

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WILL AMERICA HEED *the* EXPERIENCE *of* ENGLAND?

By Sydney Brooks

FOR all naval and military purposes the United States is now an Ally among the Allies. Whether the partnership which she has thus entered will extend to political objects is an issue on which American opinion is still fluid, which no one on either side of the Atlantic desires to raise unnecessarily, and which may on the whole be pretty safely left to be determined by events. For the time being it is enough that America has adopted a policy which involves, in the President's own words, "the utmost practicable coöperation in counsel and action with the Governments now at war with Germany." How can that coöperation be best assured? In what form will it make itself most decisively felt?

These are questions so vast—so much vaster, I think, than most Americans seem at present to realize—that they can only be dealt with piecemeal. Take, for instance, the problem of munitioning the American troops that sooner or later one hopes will be fighting on both the eastern and western fronts. It is a problem that can be easily solved and just as easily bungled. The essence of it is summed up in the question whether the American forces that are likely to be dispatched to France and to Russia should use the American Army rifle, firing its own special cartridge, should use American guns, also firing their own particular shell, or should be armed throughout with identically the same weapons and the same ammunition as their allies in the field. An instinct of pride and patriotism would probably lead the average citizen of the United States to answer offhand that the American Expeditionary Force should be distinctively and unequivocally American from top to bottom, not merely in its personnel but in all its appliances and equipment. But it would be an unthinking instinct; and the more he came to look into it the more surely would any man of ordinary business sense realize the enormity of the blunder that would be committed if the United States Government were to insist on furnishing its troops with separate and differentiated types of material for their own exclusive use.

To do that would be to repeat one of the fundamental and most glaring errors of the Allies—the error of not, from the very start, aiming at a uniformity of arms and munitions. Had there in 1914 arisen some commanding personality to point out that the Allied forces constituted in reality a single Army and should be provided accordingly with weapons of the same pattern; had a Joint Commission then decided, for instance, that the British rifle and the French '75's and the Lewis machine gun and so on were to be the standard weapons of their class and used to the exclusion of all others throughout the Allied armies, the value of that decision in saving time, money, and energy, in

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speeding up production, and in multiplying output would have been worth many victories in the field. As it is, each country has clung, at enormously increased expense, to its favorite and familiar tools. One may see the consequences in the American factories that are engaged in making munitions for the Allies. Certainly three and possibly four different types of rifles and guns are being manufactured in the United States on British, French, Russian, Italian, and Rumanian account. The difference in the relative efficiency of the completed rifles is small. But the difference in their mechanism is so great as to demand huge separate plants for making them; and the manufacturers, while engaged in turning out what is essentially the same weapon, are faced by such a variety of technical problems that they are unable to profit by each other's experience.

There is this further reason why the American troops that are to be sent abroad should fight not with their own weapons but with those of their allies —that the United States to-day is better prepared to furnish arms, ammunition, and equipment for the Allied forces than for its own. That is one of the most curious consequences of the war. There are at this moment greater facilities in the United States for manufacturing, for example, British and Russian rifles than for manufacturing American rifles. The Government arsenal at Springfield, working at highest pressure, could perhaps turn out 1,500 American rifles a day. It could not, of course, do this at once. A month after the severance of diplomatic relations with Germany I understand it was not producing more than 200 a day. But by a great effort it would no doubt be in a position three or four months from now to raise the output to the maximum of 1,500. But that is a mere bagatelle by the side of the capacity of American factories for making the rifles in use in the Allied armies. In the course of two and a half years' somewhat grilling experience American manufacturers have laid down the plants, have assembled the material, have trained and organized the labor, and have accumulated the technical knowledge to produce, not 1,500 rifles a day, but 15,000. And all these facilities are immediately available.

From the manufacturing standpoint, therefore, it would be far better that American troops, if sent to fight side by side with Russian troops, should be armed with the Russian rifles that are being made in this country and the output of which could at need be enormously increased; and if sent to fight side by side with the British troops, they should be armed with British rifles, the production of which in the United States already greatly exceeds the production of the regulation American rifle. And what applies to rifles applies equally well to guns and shells and small-arms ammunition. Judged by the requirements of modern war the United States Army is badly off for heavy guns. Even including the 15-pounder field guns, there are probably less than 1,000 in the whole country, and among these the 6-inch and the 4.7, the heaviest guns that the United States Army possesses, but comparatively small when measured by the scale of present-day artillery, number no more, I believe, than 70 or 80.

But guns of far larger calibre have been made in America during the past two years and in very considerable quantities for the Allies. The Bethlehem Steel Company alone has turned out in the past thirty months twice as many British 18-pounder field guns, with wagons and limbers all complete,

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as there are guns of all calibres in the American Army; and the shells to go with them it was for a long while producing at the rate of 800,000 a month. Clearly, then, it would seem advisable that the United States Government, rather than attempt to arm American troops with strictly American weapons —a task that would involve most hazardous delays and an immense dislocation of existing munition plants— should make its armaments conform as far as possible in every particular to those of its allies in whose company it will be fighting, and should turn to the fullest and earliest account the exceptional facilities for carrying out that purpose which lie to its hand.

But the military argument in favor of a uniformity of munitionment is even stronger than the industrial. It so enormously simplifies every problem of transportation and supply behind the front and up to the firing line that on that ground alone it may rightly be spoken of as little less than a necessity. A ramrod thrust into the wheels of a clock would be hardly less disturbing than the presence on either the eastern or the western front of a new force with new weapons and separate ammunition, disorganizing the present tried system of bringing up material, necessitating special arrangements, and overburdening the already choked roads and congested railways; and the greater the force the greater the disturbance. And apart from this, to have part of an army dependent upon particular and esoteric armaments would destroy the cohesion and confidence of the force as a whole, would enhance a hundredfold the difficulties of pushing home a successful attack, and might easily prove disastrous in the event of a sudden retreat. The point hardly needs laboring. An army cannot be called an army at all unless the weapons with which all sections of it fight are identical and interchangeable; and for the United States to miss or ignore or to fail to act upon that fundamental principle would be to fall into one of those initial errors of judgment from which recovery is impossible.

This does not mean that the American troops who will be serving in the United States itself should not be furnished with American armaments, if these can be had in sufficient quantities and within a reasonable time. The 1,500 Springfields a day that the Government arsenals are capable of manufacturing, the seven or eight hundred thousand other Springfields that are in reserve, and the 300,000 Krag-Jorgensens, that so dramatically failed to find a purchaser on the very eve of the war, would be amply sufficient for the forces that may be called upon to protect the American border. Let the American troops on service in the United States be armed in any way the Government thinks best. Let the American troops on service abroad, in Russia as well as in Europe, be armed as the rest of the force, of which they will form a part, is armed. That is what the principle of homogeneous weapons and equipment means. It means also, and as a matter of course, a very careful survey and pooling of all the industrial resources of America and the Allies, so that there may be no overlapping and no wasteful duplication.

The common idea in the United States seems to be that there will be an immense outflow of munitions from America to all the Allies and particularly to Russia. That idea may be realized in part. So far as Russia is concerned I hope it will be fulfilled, very completely. But it is obvious that in the manufacture of many of the paraphernalia of up-to-date war America is still singularly deficient. Her

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airplanes for the most part belong to the Dark Ages of flying. Of that amazing variety of implements which trench warfare has called into being she knows next to nothing; and she is almost equally innocent of the giant guns of to-day. It must also be remembered that the diversion of industries to war purposes has been carried infinitely further in the Allied countries than in the United States and that American contributions to the Allied stock of war material, while timely and considerable, have been insignificant by the side of the French and British output. It follows, therefore, that for many of the essentials in the equipment of a modern army the United States will have to rely upon the factories in Great Britain and France; and to determine what she can make for herself and what can be supplied to her with better advantage by the Allies will be no small part of the agenda before the war councils at Washington.

It may help to bring out the importance that should be attached to uniformity of armament if I refer to the case of the Lewis machine gun. If British military opinion were canvassed with a view to ascertaining to what particular American invention Great Britain and her Allies have been most indebted in this war, the Lewis machine gun would easily and unquestionably head the poll. I understand there has been some technical controversy over its merits at Washington. But there has been no controversy of any kind at the front. Lord Northcliffe a little while ago was describing it as "the favorite weapon with Haig's Armies." It certainly was so when I was in France and Flanders last fall. Some 60,000 Lewis machine guns have, I believe, been served out to the Allied troops. I suppose that not fewer than 15,000,000 shots are being fired from them daily. Most of the instruction at the machine-gun schools which I have visited behind the front and in Great Britain is being done with Lewis guns. It is the only gun of its class that lends itself to being carried in the vanguard of an attack. Very few, if any, of our British airplanes are armed with anything else, and of the seven Zeppelins we have accounted for six were brought down by aviators firing this light and extremely handy weapon. After fully two years of experience in actual and daily warfare I know of no gun that has more completely justified itself. The American military authorities themselves testified to its efficiency when they borrowed three or four hundred Lewis machine guns from the British Government to accompany the troops to Mexico.

Since the declaration of war on Germany the obstacles, whatever they were, that prevented the adoption of the Lewis machine gun as a regular weapon of the American Army have apparently been swept away. I infer as much from the recent announcement that orders for Lewis guns had been placed by the Government with the Savage Arms Company, which for some time past has been shipping them to the Allies at the rate of fifteen or sixteen hundred a month. But inquiry shows that these orders have been given on condition that the Lewis machine gun is altered to take the American cartridge. The difference between the American and the British cartridge is infinitesimal. None the less it is large enough to necessitate the manufacture of new jigs and gauges and the partial stoppage and reorganization of the plant in order to comply with the condition laid down by the American Government. And that, of course, means a period of testing and experiment.

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Now there is an abundance of British cartridges being manufactured in the United States and the question of the supply of ammunition would hardly, therefore, have bothered the American authorities. That, however, only makes the doubts of the ordinary layman as to the wisdom of their policy in this matter all the more obstreperous. For in the first place, by insisting on adjusting the Lewis machine gun to American ammunition, they are hindering its manufacture at a time when speed is the essence of the contract. And in the second place, if they meditate dispatching to the front machine gun sections using only American cartridges, they will be brought up against the difficulties that are inseparable from diversity of equipment within the ranks of what should be a single army. What emerges from an incident that is only important so far as it may be typical is the apprehension lest the United States Government should have departed from, or should have failed to grasp, the vital principle of uniformity of armament.

The problems of the size of the armies that the United States should raise, and of the system on which they should be based, are conditioned by factors almost too many to mention in the space at my disposal. Some of them were tersely set forth by the President in his address to the Nation on April 16th. It is perfectly true, as he then pointed out, that the United States has other and urgent duties to perform besides the duty of fighting. She has ships to build, the food supply to conserve and increase, fuel, steel, and other raw material to furnish from her mines and factories, munitions to manufacture in quantities at present undreamed of. These are one and all vital and indispensable services, and the proper performance of them will call for a greater upheaval in industrial life and in the relations between the State and the individual than all but a very few Americans seem to realize now. They will test the patriotism, the spirit of sacrifice, and above all the imagination of the American people as they have not been tested since the Civil War.

The President was right in saying that the creation of a large army is a simple undertaking by the side of these variegated industrial enterprises. For they involve, each and all of them, the thousand and one human and social factors that together form the problem of Labor. The United States is launching out into this vast and most necessary programme of manufacturing and agricultural specialization precisely at the moment when she is more prosperous and also more shorthanded than ever before in her history. For now nearly three years there has been next to no immigration into this country; business was never better; employment was never so good; and it seems clear that the schemes outlined by the President cannot be carried out without an immense diversion and dislocation of the labor supply. Whether they can be carried out at all merely by appeals and exhortations, State guidance and encouragement, and the ordinary higgling of the labor market—whether in prosecuting them the United States may not be driven to strong measures of Governmental direction and control and even to a system of compulsory civil and industrial service that will allocate to every man who is not wanted in the Army or Navy, and to every woman, too, his and her definite sphere of work—are questions that only experience can resolve.

The effort that the United States is contemplating is not beyond her powers if, but only if, her people are

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really roused by the war. We have found in Great Britain that under the propulsion of a fierce exalted passion of patriotism the productive energies of the nation can be pretty nearly trebled; that women will come forward to take the places of the men who have gone to the front and will work harder and better; that the inventive genius of the people is immensely stimulated; and that the men who are left in the ranks of industry realize their obligation to put forth the very best of which they are capable. That is why, while waging the greatest war in all history, we have been able to maintain the value of our ordinary foreign commerce at a figure only once exceeded in the most prosperous years of peace.

But there are a multitude of incentives driving us on that do not operate in the case of the United States. We are in the thick of the war and have been for over thirty months. You are remote from it and are still only hovering on its outer edge. It can never come home to you and your hundred millions of busy, isolated citizens as it has been inexorably brought home to us. Every Briton knows that his country is fighting for sheer existence. Very few Americans believe that the existence of the United States as a sovereign and independent community is really at stake. We are daily dedicated anew to our task by the grim goad of the casualty lists and by tales of near-by battles in which our sons and brothers and husbands and friends have fought.

But the United States, while in the war, is not yet of it: the Atlantic still flows between you and the firing line; no American has yet been killed, none may ever be killed, by a German bullet or shell on American soil; many months seem likely to elapse before American troops are seen either in Europe or in Russia or before any actual fighting has to be done to protect your own borders; distance must always veil from you the inspiriting realities of the struggle; and high and wholly without thought of national aggrandizement as are the motives with which the United States has entered upon its crusade, one cannot be sure that they possess the sustaining power and the pressing personal imperatives that will brace your people to meet all sacrifices and all privations and any restraints not only without complaint but with an eager and joyous response. I said just now, and I repeat, that the war will test beyond anything else the quality of the American imagination. At present, while there is interest and some excitement and a quantity of good work being done by the federal and state authorities, I detect no tidal wave of enthusiasm, I am conscious of no war atmosphere, I feel that to the great majority of those around me there is something unreal, something well-nigh inconceivable, in the whole adventure.

All this counts. The temper of the country, the spirit of the people, and their emotional reactions cannot in a democratic nation be ignored when you are determining the scale and system on which armies are to be raised. Still less can you overlook the claims of those industrial and agricultural services which in the case of the United States are rightly held at the present juncture to be of paramount importance. The power of the enemy, the probable length of the war, the needs of the Allies, and the political prejudices and prepossessions of the American people have also to be taken into consideration before the military policy of the United States can be mapped out along sound lines. There are many elements in the problem that

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can of necessity only be known to the inner war councils of the Allies. The state of Russia, for instance, and the attractive possibility that it may be the chief industrial and administrative function of the United States to reinforce the eastern front by deluging Russia with munitions and taking the chief part in developing her communications and furnishing her with the supplies she sorely needs—this in itself is an immense factor. The conditions in France, again, the degree of exhaustion to which that suffering and indomitable land has been reduced, and her requirements in men and material—these, too, are matters of vital moment. An outsider is conscious of working very much in the dark and of venturing suggestions on these high issues with at least half the relevant details hidden from him. But there are some points that seem to appear with tolerable clarity and confidence.

First, it seems to me the nation needs awakening to the war. We needed it in Great Britain, for all our proximity to the struggle and our intimate touch with it. But in the United States, naturally and inevitably, the need is ten times greater. Would anything be lost, would not much be gained, by an immediate campaign of education, reaching all parts of the land and conducted on the lines of a Presidential election, by every device of oratory, posters, advertisements, parades, and "literature," to explain to the mass of the people the noble causes for which the United States has taken up arms and to generate the spirit that can alone guarantee the full and efficient performance of the obligations she has assumed? There is no force like the force of a democracy which knows what it is fighting for, is uplifted by the knowledge and is resolved upon victory; and to evoke this force and to fortify it with reason is one of the first duties of statesmanship.

Such a campaign as I have in mind would probably produce its best results if it were associated in the first instance with voluntary recruiting for the Army and Navy. That the United States must come, and ought to come, to compulsory service, that it is the only equitable and democratic and in the long run the only efficient system, is an opinion that is now scarcely disputed by any close student of military and international affairs. But it is obvious that its adoption makes heavy inroads on American practice and traditions and that a vast amount of preparatory work must be done before it can be set in motion. In view of these conditions an American statesman might well hesitate to make the plunge at once, might well urge that the country should be led to it gradually, and might not less forcibly argue that the beginnings of a national army can be made more speedily with the voluntary system.

It seems to me that if Congress were to fix the total number of men to be recruited for the American Army at, say, 2,000,000; if it were to designate a term of three or four months during which an effort was to be made to approach this figure by voluntary methods; and if it were to decree that, on the expiration of that period, the principle of universal compulsory service would come into operation and would be applied as and when the military authorities thought best—it would appear to an Englishman, remembering the experience of his own country, that in this way the United States would get most of the benefits, and few or none of the disadvantages, of both systems. The violence of the break with established customs and habits of thought would thus be miti-

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gated; what is best in the voluntary system—I mean its spirit of willing and reasoning self-sacrifice—would have ample opportunity of displaying itself; the country at the same time would be undergoing an education in the necessity of the larger solution; and the War Department would be given time in which to get ready for its application.

Much of the virtue, or at least of the efficiency, of compulsory service, so far as America's share in the present war is concerned, lies in paving the way to it as carefully as possible. The censuses which are being taken in many states of man-power and industrial capacities are considerable steps in the right direction; but there is a danger that unless these censuses conform to a common model, answer the same set of questions, and furnish information that can be readily classified and collated, they will form but a poor foundation for a national system. The federal system which obtains in the United States is a great aid to military efficiency, in that it makes devolution easy and natural; but it is also a detriment and a handicap so far as it permits individual governors and states to tackle in their own way problems that can only be solved on simple, national, and uniform lines. The supreme director of any military or industrial census of the United States should, of course, be the Secretary of War, and the separate states should simply carry out his instructions. Given organizing ability at headquarters and a volunteer force of women to distribute and collect the forms, a complete survey of the military resources of the United States could be taken in six weeks.

In this, as in all other matters connected with war, we have found in Great Britain that publicity is a weapon of the greatest potency. I see abundant signs that the United States has profited by our blunders in recruiting and that Americans will not be enlisted in such numbers as to swamp the military organization or without careful consideration of their possibilities of a more effective usefulness outside the Army. And I also see that the Government has realized the importance of making the war interesting and intelligible to the great body of citizens and of conducting its operations as much as possible in the light of day.

Its recent establishment of a Publicity Department under the direction of a trained journalist is an excellent innovation. Our press censorship in Great Britain went altogether too far in the way of repression and was, indeed, one of the causes why the British people were slow to wake up to the magnitude of the crisis. Yet there is no reason why an adequate and sensible censorship should be beyond the wit of man. I have never heard of one, but I refuse to believe it an impossibility. The first principle, in the light of our British experience, that a censorship should observe is, of course, the suppression of all news that could assist the enemy. The second is that only official information should be published regarding the movements of ships and troops, the names of regiments and officers, the supply of war material, and the state of national defense at any naval or military point. The third—and this is where we failed and where Americans, I hope, will succeed—is that outside the above limits, comment, description, and criticism should not be penalized and that no effort should be made to use the censorship as a cloak for official incompetence. It is not merely difficult, it is dangerous, to attempt in war time to ride a democracy in blinkers.

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FEEDING *the* ARMIES *of* EUROPE

By ALONZO ENGLEBERT TAYLOR

[*Professor Taylor, Rush Professor of Physiological Chemistry at the University of Pennsylvania, spent six months in Germany and England as special assistant of the Department of State, assigned to the inspection of prisoner of war camps. This article is based on personal observation of the problem of food supply in those countries.*—THE EDITORS.]

THE soldier fights on his belly. He also fights on his feet and on the morale of his family. War in the past was largely individualistic, both in preparations and in operations. War to-day is communistic, in preparations and in operations. In the modern war, capital, labor, and the military forces serve the State for nominal compensation and in close coöperation. The problem of feeding the military forces is only a part of the problem of feeding the nation, and cannot be solved except as one factor in the general equation. The national problem of subsistence cannot be solved as a question in the physiology of nutrition—it is part of the larger problem of preparedness in industry, agriculture, and economics. The nutrition of the civilian classes is quite as important as that of the military forces, since civilian efficiency is founded on nourishment and the spirit of the warrior rises and falls with the food supply of his family. The direct subsistence of the military forces is naturally divided into two operations: securing the foodstuffs in accordance with the best interests of society as a whole; and utilization of the available foodstuffs in accordance with the science of nutrition. It is to the second question that this article is devoted. The writer was in Germany and England during six months of 1916 and was enabled to make a study of the subsistence of the military forces in those countries. The experiences of Germany and Great Britain must be of direct value to our country, and will be here presented in outline rather than in figures and without technical details.

The rations of the standing armies of the larger countries now at war were, in time of peace, diets de luxe from the standpoint of the specialist in nutrition. In caloric content they varied from 3,800 to 4,400 calories* per day. These correspond to intakes or rations for very hard-working men, yet little of the routine life of the soldier in the regular army is to be classed as hard and continuous physical work. Taking the average body weight of the soldier and sailor, the heat production of the resting man would not be over 1,900 calories per diem, including the heat of the specific dynamic action of the foodstuffs. If the diet contained 3,700 calories, actually consumed, this would correspond to about 3,500 calories absorbed and utilized in metabolism. Deducting from these 3,500 calories the 1,900 calories pro-

*A calory is the usually accepted unit of heat representing the amount of heat necessary to raise one kilogram of water one degree Centigrade. The fuel value of foods, in other words their power to produce heat and energy, is measured by the number of calories they contain.—Ed.

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duced by the normal body at rest, there remain 1,600 calories available for the support of work. These 1,600 calories would yield, in accordance with the usual mechanical efficiency of the human muscular system viewed as an engine, mechanical work to the value of some 400 calories, the rest being dissipated as heat. Four hundred calories corresponds to 170,000 kilogrammetres of work. This is equal to walking twenty-three to twenty-five miles on a level road, carrying the regulation military pack, at the rate of 2.7 miles per hour. A hard day's work of ten hours is commonly estimated as corresponding to 170,000 to 200,000 kilogrammetres of work. Few heavy occupations involve the doing of as much as ten kilogrammetres of work per second for a work day of ten hours, or 250,000 per day. Mountaineers, however, often do over 300,000 per day. The factor for mechanical efficiency used in these calculations is 25 per cent. In trained and hardened individuals the efficiency in walking is probably 30 per cent. The heat of the specific dynamic action of the foodstuffs is usually regarded as available for work, so that as a matter of fact in the average soldier of 156 pounds, on an intake of 3,700 calories, the energy corresponding to 225,000 kilogrammetres is daily available for mechanical work.

The great importance of sound feet and good condition of the feet in the soldier has been experimentally demonstrated and measured in German investigations into the physiology of the military march. The footsore soldier expends a third more heat in the performance of a certain work in walking than when his feet are normal. Tire and general physical conditions also increase the heat output attending the performance of a fixed piece of work. With a sound physique, probably the condition of the feet is the most important single factor in the mechanical and mental efficiency of the soldier. Sound feet include protection from moisture, correct fitting of the boot, proper weight of the boot, and such texture of leather as to avoid friction and pressure and to permit the boot to follow the movements of the member. The world's demand for leather is almost past the imagination of the trade. In Europe some thirty million men are wearing high service boots, in this country nearly thirty million women are wearing high street boots, the industrial uses of leather directly and indirectly related to the war are very large—where does the leather come from? In Germany the problem of leather has been quite as urgent as the problem of food.

It does not seem possible that any such amount of food as 4,000 calories can be consumed in the ordinary garrison life of a standing army. There must be a heavy waste, probably as high as six or eight hundred calories per day. Garrison drill does not as a rule anywhere nearly equal walking twenty-five miles per day. In the manœuvres of the Continental armies such outlays of work were frequently accomplished, even more; but for the most part, an intake of much less would suffice to cover the requirements. In the experiments conducted by Chittenden several years ago, using United States regulars as subjects, thirteen soldiers, weighing on an average 60 kilograms (132 pounds) were maintained for six months on diets that contained from 2,500 to 2,600 calories. The men were given two hours of hard gymnasium work and one hour of drill or walking daily. At the end of the tests the men were in excellent physical condition. Several of the heaviest men had lost

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weight. The experiments have been criticized on the ground that body weights alone cannot serve as criteria of maintained health on the plane of stated subsistence. In the instances where weight was lost, the fat must be added to the figure for intake. In the cases of the men who did not lose weight, it was still possible that they exchanged muscle for fat, with a consequent gain in energy. Taking the criticisms at their face value, the fact remains that the soldiers under test consumed some 1,400 calories less than the amount contained in their accustomed garrison ration; and if the test does not prove that the Chittenden intake was adequate, it certainly indicates that the caloric content of the ration was excessive. A group of men leading a garrison life, doing the usual drill of peace time service, and ingesting 4,000 calories per day, would certainly develop obesity. There must be a large fraction to be subtracted as waste.

Subsistence in the United States Army varies according to one of three rations: the garrison ration, the reserve ration (a tide-over), and the travel ration. The caloric content of the garrison ration will vary somewhat with the nature of the articles of food selected by the men from among the several possible substitutive articles. Thus a man may select tomatoes instead of potatoes. Calculated directly, the figure is 4,250 calories; it might be as high as 4,600, or as low as 3,800. The caloric value of the travel ration is about 2,650. The present home ration of the British army contains, in direct allotments, 2,520 calories; and in the list of substitutes, that may be varied with the taste of the man, on an average, 1,510 more, in all 4,030 calories, that could be raised or lowered a hundred calories. The field ration is slightly larger. The field ration of the German army at the beginning of the war was about 3,800 calories. The intake of the boys in the St. Paul's school over a period of a number of weeks was determined by Gephart to be over 5,000 calories per day. But, of course, other things equal, the adolescent boy eats much more than the adult man.

The warfare on the western front has contained very little forced marching, except during the first weeks of the war. The caloric requirements of trench warfare are probably comparable to those of medium hard work. A day spent in digging a trench is probably equal to walking ten or fifteen miles. Working at excavation at high speed or dragging gun carriages would involve considerably more activity. Repair of roads may be classed as medium heavy work. Actual service in the trench is not attended with arduous exertions, but is frequently associated with exposure to cold and wet, leading to heavy loss of body heat through conduction and radiation. At the best, we may be certain that trench warfare entails considerably greater heat production than active garrison life with the normal drills. Mental tension and nervous strain do not, in calorimetric tests, result in any material increase in heat production. But the nervous strain of trench life might do so by provoking restlessness; and it is not by any manner of means excluded that nervous strain of high degree may not lead to increased heat production through perversion of metabolism.

The ration of the British soldier has not been reduced during the war. It is the understanding of the writer that the ration of the French soldier has also been maintained. The ration of the German soldier was maintained until some time in the winter of 1915-16, when it was reduced to 3,200

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calories per day. This has been the subsistence in calories for over a year. During several months of last summer, two meatless days were observed each week by soldiers not in active trench duty. The medical authorities of the German army regard the physical state of the men as having been fully maintained upon this intake. The scientific authorities regard the intake as adequate to meet requirements. The writer has seen many thousand soldiers in Germany. They looked very tanned, hard, and healthy. Very few were obese, but none were emaciated. The newly wounded German prisoners seen in England were in excellent nutrition. There were no indications that the military power (man-power) in offensive or defensive had been in the least reduced. The diet was one that must leave an abnormally large intestinal residue, as the vegetal foods predominated, and these are less well absorbed than meats and dairy products. This makes the diet lower in reality than it was on paper. All things considered, it is fair to state that the intake of the German soldier on the western front has not been over 3,000 calories per day for a year past. The inevitable conclusion is that 3,000 calories have been enough to cover the needs. The second conclusion is that the higher intakes of the opposing soldiers were needlessly high, from the purely animalistic point of view of physiology, though probably desirable from the psychological point of view. The prisoner of war ration in Great Britain was in the neighborhood of 2,800 calories to men leading a sedentary life. In Great Britain, according to the voluntary measures of repression recommended by the authorities, the intake of the civilian workman, man or woman, need not be over 2,800 calories. The results of the experiences with civilians may be expected to lead to a reduction in the army ration, in the event of greater scarcity of food in the United Kingdom.

At the beginning of the war the protein of the German ration was in excess of 125 grams per day. Early in 1916 this was reduced to between eighty and ninety grams average per day, including the two meatless days when not on trench duty. Despite a rather low intake in total calories, the reduced protein ration seems to have covered the physiological requirements.

In theory, both military and physiological, the ration of the field ought to approximate the garrison ration in quantity, quality, and preparation. In the present war this has come very near to realization, due to the successful conservation of foodstuffs and the development of the motor-truck kitchen and the portable kitchens. The culinary equipments of the German, French, and British armies really rival, in efficiency, the installations of large hotels. The motor-truck kitchens penetrate to the region directly behind the trenches. They enable the commissariat to offer to the men warm food, in situations and under circumstances where formerly reserve or travel rations alone could be supplied. They take from the men the burden of preparation of food, except under most unusual circumstances. To the Germans, who have been compelled by the blockade to concoct new preparations of food, the improved camp kitchens have been invaluable. A diet low in meat of any kind, and particularly in the absence of canned meats, cannot be issued individually; it must be served in a cooked state, since this is the only method of preparing vegetables. Many of the German camp meals are thick soups, and in this manner alone has it

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been possible to concoct tasteful dishes from the ingredients available. When the circumstances under which they have operated are considered, the Germans must be accorded high praise for their management of commissary and subsistence. As a matter of fact, the reduction in quantity that was carried into effect in the German army was possible only because the food was prepared in bulk and in accordance with the natural tastes of the men.

Great improvements in the ration and in the preparation of the food of the men, in camp and trench, have been made possible by modern perfection of cold storage, canning of vegetables, and desiccation of vegetables. In the prisoner-of-war camps in England the writer has seen refrigerated beef, mutton, and rabbit from Australasia, beef and mutton from South America, and beef from North America. These were the same meats served to the soldiers drilling at home and fighting in France. With rare exceptions these refrigerated meats were flawless in quality. German prisoners of war in England complained to the writer that refrigerated meats could not be as good as fresh meats since "the spirit was frozen out," an idea also held by some of the uneducated British laity. The tinned meats from the same far quarters of the globe were in like manner usually perfect in quality; they form the almost sole source of animal protein to the British prisoners of war in Germany, and some of these men have been living on them for over two and a half years. In our country there is a widely held conviction that all canned foodstuffs should be removed from the cans as soon as the tins are opened. It is believed that the contents in contact with the metal, exposed to the atmosphere, develop toxicity, though the writer has never been able to learn whether the anticipated toxicity was supposed to be of bacterial or chemical origin. Now the equipment of the British prisoner of war in the German camp did not often permit of his following this practice. The contents were allowed to remain in the cans until consumed, often for days. So far as the writer could determine, noxious effects did not follow.

The same high praise must be meted to the canned fruits and vegetables. These, mostly of North American manufacture, have proved themselves of excellent purity and quality, and have contributed greatly to the diversity of the soldier's diet in Europe. The desiccation of vegetables has been especially perfected and used in Germany. The processes were, in their present scope, originally planned as conservative measures, to save vegetables from decomposition. The possession of desiccated vegetables has, however, made it possible for the German authorities to offer to the men at the front diversification in the diet not otherwise attainable. Furthermore, since the taste of desiccated vegetables is almost indistinguishable from that of the fresh, it has enabled the commissary department to present to the German soldier food prepared in accordance with his home tastes. The ration of the German army is more diversified than that of the British, containing more vegetables and also a greater variety of them. This state of affairs pleases the German, but does not displease the Britisher. The well-known order at Simpson's, on the Strand—a slice of rare meat, a piece of potato, and a bit of cabbage—seems to suit the man fighting for the Union Jack, but it would pall upon the German who loves all sorts of vegetables cooked up into a soft mess and served with a piece of sausage.

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With the continuation of the war, the ration allotments of fat in the form of butter or margarine tend to fall, especially, of course, in Germany. In the British army, bacon is being used to replace the table fats; in Germany jams are used instead. The low supply of fat in Germany has had a very painful result upon the ration, since foods cooked and eaten without fats are unpalatable.

In past wars, nutritional disturbances of the scorbutic type have been prone to appear, especially during prolonged wars. These diseases are now regarded as due either to the predominance of unbalanced, incomplete proteins in the diet, or to the absence of the so-called vitamins, one water-soluble, the other fat-soluble. The presence of a moderate amount of meat or cheese insures intake of complete, balanced proteins. So far as the writer was able to determine, no such diseases have appeared in the armies of Great Britain, France, or Germany, though they have been reported in Russia, in the Balkans, and in Turkey. The heavy use of refrigerated meats in the armies of the Allies, together with the universal use of fresh bread raised with yeast, has served to protect them. The desiccated vegetables are known to contain their vitamins unimpaired, as, in the processes of desiccation *in vacuo*, the heat is applied to so low a degree and for so short a time as not to destroy them. In all the armies, fresh vegetables have been used to a degree never before known in war. In the German prisoner-of-war camps, the only vitamin-containing foodstuffs in the diet of the British prisoners are bread and occasionally freshly cooked potato and fish; otherwise the British there live entirely on tinned foodstuffs sent out from home.

The hard breads, biscuits, and crackers of past times have been largely replaced by standard baker's bread. The field bakeries are as advanced and as competent as the field kitchens. The flours are milled to a much higher percentage than in peace time—up to 80 per cent. as a rule, in Germany even to 93—and the resultant breads look and taste more like whole-wheat bread than like white baker's bread. The bakers have learned how to put a crust on the loaf that largely prevents the interior from drying out, and the result has been that the bread keeps much longer in edible state. The writer has seen many loaves of bread that were six weeks old and in perfect condition.

Dried fruits have been used to a larger extent in the army rations than previously. Everywhere the rations include more of delicacies and refreshments, as pleasing addenda to the staple foodstuffs. An extra or a variety here and there, often trifling in itself, has a great effect in preventing a ration from becoming tiresome. The subsistence of the soldier is the important factor in his morale. For the first time in the history of wars, it may be said that the military forces have had little or nothing to contend with in their rations. The contrast between the conditions of subsistence in the war camps of the present war, with its enormous magnitude, and those in our camps in the little war with Spain is too painful to require discussion.

Sugar has proved itself of particular use in the diet of the soldier, in accordance with laboratory experience. Sugar is the most readily ingested and directly assimilable source of energy in the entire list of foods. Cane sugar can be demonstrated in process of utilization (combustion) within fifteen minutes after ingestion. Being compact, cleanly, and proof against de-

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composition, it is the ideal emergency food, to be carried by the soldier on duty and used as an immediate source of energy. During the period of convalescence, too, sugar has proved itself an invaluable article of diet.

In the opinion of the writer the grog ration (including in this term the issue of spirituous liquors) serves in the diet of the soldier no nutritional purpose that cannot be fulfilled by sugar, without the drawbacks of alcohol. Sugar is quite as diffusible and rapid a source of energy as alcohol. Alcohol, even in small doses, is known by careful experimentation to reduce efficiency in the performance of motor acts, especially such as are associated with the use of the special senses. Light alcoholic beverages, as beer and wine, are highly prized as refreshment by the troops. Large amounts of wine are issued to the French soldiers, and during the first two years of the war beer was freely issued to the German troops. The growing tendency in the British army, I was advised, was to issue no alcohol to the men on duty in the trench, but to permit its use after the men had come out. Here, obviously, alcohol was used as a narcotic rather than as a source of energy. The use of a mild narcotic seems almost indispensable under the conditions of nervous tension of modern warfare. The use of tobacco is of obvious advantage. The morale of the soldier ought not to be disturbed by any attempts to reform him in personal habits; and a crusade against tobacco, beer, and wine, under controlled conditions of use, is out of place in the army in the field. Since the war has settled down into the steady routine of trench warfare, there has been very little abuse of the use of alcoholic beverages.

The larger relations that obtain between the subsistence of an army and the subsistence of the civilian population can only be appreciated by one who has studied the economics of a nation at war. If our Government should recruit a million men, and the commissary department enters the open market to purchase the food for those men, it will produce about the same result as if the most wealthy man in our country were to appear upon the stock market as a bull. In Germany, there have been times when the buyers for the army and the contractors for the large cities have practically cornered the food market. Great care is required to prevent the mobilization of foodstuffs for an army reacting seriously upon the supply and price of foodstuffs for the civilian population. It is not enough to feed the soldier; his family must be fed. A military morale cannot be maintained on a full stomach at the front and an empty stomach in the home. The problems of transportation and distribution are closely related to the subsistence of the military forces and the cost of living of the civilians. It is by close coöperation alone that success is to be achieved, the available food supply of a nation at war being known for a certain period of time. This lesson of Germany, France, and Great Britain must not be lost upon our country; our production of foodstuffs is so little in excess of our needs that we cannot afford to muddle in the matter.

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The LESSON *of* ENGLAND

By JOSEPH McCABE

[*Mr. Joseph McCabe, of London, author of "Goethe," "The Soul of Europe," etc., and translator of Maximilian Harden, Haeckel, etc., is not only a scientific student of the War in its broader aspects but is an authority on Germany. This article was written prior to the declaration, by Congress, of the existence of a state of war with Germany.*—THE EDITORS.]

ENGLISH people often give themselves a quite unmerited air of stupidity by proclaiming that the national motto is: "We Muddle Through!" It was not by so paltry a device that a small fragment of Europe became one of the great Powers of the world, nor could a people retain its position in face of the formidable modern competition if it adopted such a principle. The astounding success of England in the economic war of the last twenty years clears it of the imputation which its superficial journalists would bring upon it. The little red streak on the map of the northern hemisphere, lying between the mighty forces of Germany and America, has prospered amazingly.

Yet England's conduct during the Great War has disposed many foreign and friendly observers to doubt that the old vitality is sustained. Even in the British colonies I have heard the question repeatedly: Is the mother-country aging? Does the time approach when the children of an historic civilization must gather in its defense, or see that its retirement from its proud position be not ignominious? The phrase, "We Muddle Through," was foolishly coined in the latter part of the South African War. With equal folly some English writers would put it forward, as a source of hope and consolation, in the present crisis. Americans naturally wonder if the terrible lengthening of the conflict, the long-sustained triumph of the Central Powers, do not in fact imply that their opponents are muddling through, without art or energy, solely by the superior weight of their resources.

What was the position at the beginning of the present year? To put it briefly and baldly, the Central Powers were in possession, by conquest, of about 200,000 square miles of the territory of their opponents; they had fringed this vast territory with the ablest fortifications known in military science; they had clipped the industrial wings of France and Russia by seizing their richest regions; and all that the Allies could fling into the balance against this was the occupation of undeveloped colonial land. In the year 1916 itself the Germans had taken about 200 square miles of highly fortified territory before Verdun, and the French and English together had taken one hundred and fifty. On the eastern front the Central Powers had swept back their opponents as if they were pygmies. On the southern front Austria, stiffened by the German troops, had checked the advance of Italy. The balance of gain, twenty-nine months after the outbreak of war, was overwhelmingly on the side of Germany.

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When we have made every allowance for the advantage which Germany had in preparing the initiative and in her pivotal position, in contrast to the scattered position of her opponents, there remains much to be explained; and it is of far more than academic interest to America to study the situation. Two broad analogies between England and the United States leap to the eye. At the opening of the century England was, from force of circumstances, enamored of peace. She was sated with territory and imperial population, and her geographical position seemed to bid her rely confidently on her naval superiority and her isolation. Men scouted proposals to enlarge the army as machinations of anti-democratic militarists and the "yellow press." National service was said to be contrary to "the genius of the Anglo-Saxon race." That is the first analogy. The second is incomplete. When the cloud burst over England she was unprepared. She had refused to see the cloud on the horizon and had continued to call: "Peace, Retrenchment, and Reform!" The cloud has not yet reached America. Will the analogy be completed and the storm find America unprepared? Will those who spoke eloquently of the blood of their sons have to see it squandered in unequal combat? Will those who would save a hundred million a year have to shoulder, in two years, a burden of ten billion dollars?

Much melodramatic nonsense has been written, in England, about England's unpreparedness. Pictures were sketched, by righteous pencils, of a malignant and Machiavellian Germany secretly arming—even forging great guns in the vaults at Essen—and suddenly discharging horror upon a virtuous and unsuspecting world. If this were true, it would lay upon British ministers a heavy charge of stupidity and incompetence. Every student of political development now sees the German menace of aggression slowly moving up the sky for a quarter of a century. Lord Haldane has at length perceived that the attempt to make a virtue of England's unpreparedness reflects on his sagacity or patriotism. He has authorized and inspired a work (Mr. Begbie's "Vindication of Britain") in which it is emphatically stated that England and Germany were the only two nations in Europe prepared for the war. In Mr. Oliver's "Ordeal by Battle" are letters in which competent British officers foresaw the war, and even, several years before it broke out, located it in the fall of 1914. The French Government have published a weighty despatch in which their Berlin representative, writing in 1912, warned them that the overwhelming majority in Germany sought an aggressive war.

Lord Haldane's claim tacitly throws the blame of unpreparedness upon France, and it is at least an open secret that that country was not prepared, three weeks after the outbreak of war, to defend its own frontier. Germany lightly overran its northwestern provinces, and thus paralyzed one of its vital industrial nerves. It is neither possible nor gracious to inquire more closely into this distribution of blame. The Anglo-French forces were entirely inadequate to meet an offensive that had been preparing openly for twenty years. That is enough for America. One may add that at least in England the unpreparedness, or inadequacy of understanding with France, was due to the incompetence of the relevant ministers and departments; and that in both countries the task of preparing was criminally frustrated by unpractical "humanitarians" who preferred the easy luxury of moral sentimentality to the stern and prudent consideration of

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facts. It is extremely doubtful that the war would have occurred had not Germany been pleasantly aware of these elements which fostered unpreparedness. It is at least certain that, allowing for the inevitable cost of a struggle with so able and energetic a Power as Germany, the incompetence of our administrators and the talk of our dreamers have cost Britain a billion dollars and a great loss of world-prestige—lost her the results of twenty years of industrious prosperity. Lofty moralists like Bertrand Russell, Ponsonby, and Trevelyan are costly luxuries.

The slowness with which Britain awoke to the real magnitude of its task was due, not to any defect of the national character, but to the same influences. "We are slow but sure," Britons say. No people is more singularly apt at self-libel. When it was seen that our regular army was miserably inadequate, three million of our finest young men—I do not count the fourth and fifth millions because of the pressure put upon them—rushed to the colors. Their motives were predominantly idealistic. Only the more thoughtful realized the menace to England herself. They enlisted as helpers of Belgium and friends of France; as men who had still the manliness to expose their lives in a struggle against a barbaric force.

But the chivalrous outburst was followed by a reaction. Our unprepared War Office was bewildered and submerged by the flood. Our Departments clung to old traditions when the situation called for audacity. Competent men of my acquaintance offered their services gratuitously and were ushered out or put to the work of children. I know a very capable retired engineer, who, after months of pressing for work, was permitted, at his own expense, to run a cinematograph and concert-room for soldiers! I know in full detail the story of how the shells for a certain secret gun used in our trenches were held up during a whole winter owing to a quarrel about inspection that could have been, and was eventually, settled in three hours.

Perhaps the best illustration of the causes of the slowness of England is found in a speech delivered by Mr. Lloyd-George in the House of Commons in the fall of 1915. I assume that Mr. Lloyd-George was disposed to tell the naked and shameful truth and was not permitted. What happened, in point of fact, was that he described, in algebraic symbols, the enormous growth of our production of shells since the fall of 1914. It had increased a thousand fold; and the House of Commons cheered boisterously and the country ran on in its prosperous torpidity. Had Mr. Lloyd-George been permitted to tell the truth, as I then knew it, industrial England would have stripped to the waist. The fact was that England was then producing 50,000 shells a day and Germany 250,000 shells a day! But the incompetence and sluggishness of our late administration had to be decently covered by algebraic symbols of increase, and our press had to uphold the prestige of a Cabinet which was supposed to contain all the ability that the two great political parties were capable of affording. And those of us who pleaded for national service were told that we did not understand "the genius of the British people," that we were sacrificing the sacred tradition of individual liberty, that we were preparing the triumph of a militarism which threatened to undo democracy. The frothy verbosity, the anemic sentimentality, the fog in which the political parties and party-press then enveloped England make one sick when one looks back on those two years. The early adoption of national service

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would have immensely shortened the war and would have rendered incalculable benefits to the physique and morale of the nation. So rankly foolish and thoughtless was the opposition that men said we were trying to introduce "Prussian militarism" under the pretext of fighting it. Their blurred minds saw no difference between aggressive and unscrupulous militarism and a decent defensive militarism.

England was slow because neither press nor politicians showed her reason for greater sacrifices and energy. Trade unionists clung to their hampering rules. Opponents of conscription were allowed to organize all over the country and promise secret legal assistance (one of their documents fell into my hands) to the men who had a conscientious objection to being shot as well as to the few who had a genuine moral scruple. Men like Mr. Belloc proclaimed monthly that the German reserves were fast dwindling; while, according to the figures recently issued by Washington (which, however, I dispute) Germany has *to-day* only one quarter of a million less men than in the fall of 1914. There were hysterical cries for the prosecution of a great patriot like Lord Northcliffe, while secret and insidious agents were permitted to encourage the men whose one desire was to embarrass a "bourgeois" Government. At the end of 1916 very grave authorities said publicly that we were in danger of losing the war. Had they known the position of Russia they would have used even sterner language.

The turn came when Mr. Lloyd-George, with the rising sentiment of the metropolis behind him, boldly turned out Mr. Asquith and opened the political doors to others than what my friend Mr. H. G. Wells calls "careerists." The change must not be exaggerated. By that time the Allied armies had accumulated a power at which Germany plainly glanced with grave distrust. France has worked heroically in the preparation for her great campaign of 1917, and we shall probably see the tricolor wave over splendid triumphs this summer. Italy has slowly awakened to a full sense of duty. It is, however, of England's share that I can, naturally, speak most fully.

At the close of the 1916 campaign on the Somme, Sir Douglas Haig puzzled many of his admirers by claiming that the results were entirely satisfactory. One suspected that he was using the optimistic language which has so long been used to avert from the stolid British public an imaginary panic. The French and English together had taken only 150 square miles of territory. German generals made genial calculations how long it would take the Allies to recover their territory at the rate of 150 square miles a year.

The truth was gradually ascertained. After speaking to hundreds of officers and men from the front—one met them, caked with the mud of the Somme and Ancre, in every train and hotel—I had a confident view of the situation. Behind our infantry was, not to speak of other arms, a line of nine-inch guns, wheel to wheel, against which no trench fortifications could hold. The lines back to the French ports were encumbered with guns. Shells were pouring in streams from our war-shops and forming a daily river of more than a quarter of a million shells. In the later fall we had, the German Chancellor admitted, reached Germany's rate of production. Behind us was America; behind Russia was Japan. The slow mobilization of our superior resources had reached the stage of preponderance. Hence the German efforts to secure peace in France and Italy and to paralyze

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Russia. In the winter Germany was ready to evacuate Belgium and France, and to yield Italy the Trentino, apart from Triest. Germany said nothing abroad about Rumania and Serbia, but the entire German press (which I followed in London), except *Vorwärts*, agreed that Serbia and Rumania must be held. That would have left Germany dominant from Kiel to the Persian Gulf. After some years spent in recuperation, in alienating Russia from France and England, and in organizing Turkey, she could with tolerable ease have turned upon the west and completed her ambition.

England, France, and Italy, conscious of their strength, decided to fight on. The campaign on the Somme and Ancre came to a close in an ocean of mud. Our heavy artillery was sunk to the axles, and traction engines could not induce the guns to follow the impatient infantry. We had proved our superiority, but the prospect of a winter lull was disquieting. The long trench war had almost extinguished that gaiety of the British soldier which some represent as still enlivening the front, and it was a pity to arrest the recovering spirits of our men. Germany, moreover, was, as the deportations showed, making strenuous efforts to recover her superiority. Nevertheless the opening of the year 1917 found well-informed people, both in Paris and London, full of confidence. There was a quite general belief that the war would be brought to a triumphant conclusion before the end of 1917.

Those of us who had grown accustomed to disillusion looked with some concern on the new optimism, but events have conspired to encourage it. In the first place, the failure of the German campaign in the east gave us a weighty advantage. Hindenburg's hope was not obscure. He would sweep Rumanians and Russians into the Black Sea, and he would then turn south and sweep the Allied forces into the Mediterranean. A glance at the map will show that the Bulgars, Greeks, and Turks might in that case have held the southeastern region almost without assistance. The three quarters of a million German and Austrian troops would have been available elsewhere, and a great drive against enfeebled and distracted Russia might have disposed that Power to secede, or given its rulers a pretext to enforce secession. The failure of this campaign was a formidable blow to Germany's new hope. A convenient front in Rumania was held, and the treachery of Greece was prevented. Nearly a million German and Austrian troops will now be required to defend the connection with Bulgaria and Turkey.

To this advantage was soon added the swift advance in Mesopotamia and Persia. The Allies had learned their lesson. By choosing the weakest area of the territory controlled by the Central Powers they rapidly reduced the balance of square miles against them, and they discovered that Indian troops which in 1915 were decimated by pneumonia in France might deploy all their splendid fighting qualities under a more genial sky. While, moreover, the Germans were wearing out their big guns against the Russians, the Anglo-Indians could advance with lighter arms and could evade the winter armistice. The Ottoman Empire, beyond the region in Asia Minor to which the Turks properly belong, will soon have ceased to exist.

Before the end of February, Sir Douglas Haig resumed, unexpectedly, his slow, irresistible advance, and it was quickly found that the British and French had maintained their superiority of artillery and aircraft. Skilful as has been the German retire-

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ment, it is unquestionably a retreat before superior forces. If a shortening of the line means for the German defense an economy of men, it equally means a concentration of the attack; nor are the German resources so seriously depleted that their commanders would sacrifice a thousand square miles of territory in order to spare 200,000 men. It is not conceivable that the Germans have, in their rear, trench and village fortifications superior in strength to those they have abandoned, and it is plain that the Anglo-French artillery can shatter any combination of steel and timber and concrete which the enterprise of Germany and her unscrupulous use of prisoners and civilians may put together.

The situation is not without obscurity, and may hold surprises, but there is very grave reason to believe that the reduced nourishment of the German and Austrian troops and civilians is enfeebling their energy. I calculate that Germany has to-day twelve million men of military age. Of these eight or nine millions will be efficient (*Tüchtige*) or "more or less efficient" (*minder Tüchtige*), and both these categories are called to the colors. Beyond these she has ten million working males, a vast army of willing women, one and a half million working prisoners, and a large body of foreign artisans and subjects of the conquered territories. It is not hands that are lacking, but food and material. Switzerland, Holland, and Denmark have, in return for her coal or gold, parted with all their surplus stock, and can do little or nothing for her this year. The returning Americans confirm this estimate of the situation. The ill-fed munition workers cannot compete with those of Britain, who were never so richly nourished before, or with the spirited and comfortably fed workers of France. The iron hand loses its nerve.

On these moral and material forces rests the hope of the Allies. The immediate future will probably not be one of steady advance. The chief defect of the Allied cause up to the present has been the lack of coördination. Germany was able to swing round on her pivot and meet each attack in turn, or deal her powerful blows in turn. That she cannot at the moment meet an attack on one front only seems to give the measure of her increasing weakness. But we may expect her to concentrate her failing strength in an offensive at some point, and the weather conditions still favor her. The eastern front thaws, as a rule, in the first fortnight of April. The Italian front will not even then be ready. May is apt to be a very wet and dismal month in western Europe. Not until June or July are the conditions normally favorable for a great coördinated offensive, and within two months of its inception we shall probably find ourselves forecasting the date of the termination of the Great War. What that date will be depends upon the programme of reduction which has probably not yet been drawn up, but the general principles which must govern that programme are of vital interest to Americans.

Peace without conquest is a phrase which at the moment Germany rejects, and in three months it will be no more agreeable to the Allies. England, indeed, desires no conquest. British South Africa will undeniably hold what it has taken, though to Englishmen that will mean only the feeble sentimental gratification of seeing a further area of the map painted red; a luxury which we do not deem worth an expenditure of fifteen billion dollars and half a million precious and loved lives. But while England, from the nature of

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the case, not from any superior virtue, desires no territory, she has been forced to accept the idea of conquest by her allies. France will have its Alsace and Lorraine; Italy inexorably demands the Trentino and a larger share of the Adriatic; Russia will detach Posen, Galicia, and Transylvania, free the southern Slavs and the Armenians, and thus greatly reduce Austria.

America not only may, but ought to, agree with England in consenting to this programme. The supreme concern of both countries is that there shall not be, if we can prevent it, another great war. England and America are united in a hatred of aggression, because neither has an incentive to aggression. It is, moreover, clear that the chief centre of concern for the future is Germany. Her injured pride and baffled ambition will rankle. No student of history or of Germany will doubt this. There seems, as yet, no hope of a revolution in Germany; of change, either of heart or of dynasty. We must rid her of a temptation by closing all prospect of a successful war in the future. The programme I have briefly outlined achieves this. There is no need to dismember Germany or dictate changes of rulers. By a just detachment of alien provinces and a just punishment of the Turk we make war materially impossible; and we at the same time appoint a moderate term for the victorious advance of the Allies.

This idealism mingles in the mind of England with considerations of self-interest. Justly recognizing that she is fighting for her own security, England nevertheless is conscious that she has raised a chivalrous lance also on behalf of Belgium and Serbia, out of friendship for France, and in order to eliminate from civilization the last taint of barbarism in war. Those are emotions that stir also the blood of America; and if the element of ultimate self-interest were excluded from the attitude of America its participation in the war would be all the nobler. Even in these last months the fires of a thousand innocent homes blaze in the path of the retreating German. Belgium and Poland die slowly under his pitiless rule. The seas are made terrible by his insolent irresponsibility. His reptile-agents crawl among the backward nations of the earth and are found in every corruptible editorial office. When the banners of eight nations gather about his frontier, will the Stars and Stripes be there? Will America join a league of civilization to ensure that, if war be destined to continue as the method of settling certain international quarrels, it shall at least be conducted with manliness and cleanliness?

In any case the experience of England offers grave lessons. Unpreparedness is an invitation to war. Geographical isolation is no shield against modern aggressive forces. The sound maxims of a hundred years ago are the shibboleths of to-day. The nation that mumbles them instead of closely scanning its own horizon will pay dearly for its folly. Cattle never respected a field because its fences were weak. Nor is there less instruction in England's conduct of the war. "Do not distract the man at the wheel," the silly axiom with which the English deprecated criticism, is a terribly costly proverb. Free and fearless discussion, searching scrutiny of the conduct of its servants, is a right of democracy at all times; it becomes a duty in time of war. The principle of voluntary service is another discredited piece of rhetoric. It is a law of the survival of the unfit, a refuge of the cowardly and selfish. Let all who profit by the solidity and prosperity of the nation bear its burdens.

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MECHANICAL TRANSPORT *in* MODERN WAR

By MAJOR PALMER E. PIERCE
(*General Staff, U. S. Army*)

THE supply of an army always requires much detailed work and administrative ability. The normal difficulties are greatly increased by war, especially when operations are being conducted in hostile territory. The greater the needs, the greater are the efforts necessary to fill them. The immense armies gathered by Darius and Xerxes in Asia Minor did not require the same variety and quantity of food, clothing, and munitions as do like numbers of combatants to-day, yet their requirements must have been considerable. Just how they were supplied in that far from fertile country has never been fully explained. By some means immense quantities of foodstuffs must have been transported from distant points.

Herodotus, in his description of the expedition of Darius, 500 B. C., says of the Scythians who from the northern wastes threatened the advance into Greece:

> Having neither cities nor forts, they carry their dwellings with them wherever they go. They are accustomed, moreover, one and all of them, to shoot from horseback and to live, not by husbandry, but on their cattle.

Leaving Miltiades guarding the bridge of boats over the Hellespont, Darius advanced against his nomadic enemy, who retired into the Siberian Steppes without standing for battle. He finally challenged the Scythian King either to fight or acknowledge suzerainty. The King, Idonthyrsus, replied:

> This is my way, Persian; I never fear men or fly from them, nor do I now fly from thee, I only follow my common mode of life in peaceful years. We Scythians have neither towns nor cultivated lands, which might induce us, through fear of being taken or ravaged, to be in any hurry to fight with you. In return for thy calling thyself my lord, I say to thee, 'Go weep.'

Darius was finally compelled to retreat, upon which the Scythian King, pressing his rear, sent him in derision presents of a bird, a mouse, a frog, and five arrows. Not able to punish this contemptuous enemy, the Persian finally retired into his own country. This is one of the earliest examples of an army being defeated through transport difficulties.

It is known that Alexander took great trouble to conquer completely the territory of his Asiatic enemies in preparation for an advance toward India, and that he established a firm base on the Mediterranean before adventuring farther east. Undoubtedly some means of transport was provided that reached back eventually to Macedonia itself, but just what this was is not certainly known.

Ignorance also exists as to the methods of supply of the forces of ancient Rome. Cæsar said war ought to nourish war, and we may conclude

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from this that up to his time troops lived off the country in which they operated and that they had little transportation.

Many centuries later, 1200-1480, the Mongols overran most of Asia and a good part of Europe. These sturdy warriors carried along immense herds of cattle and ponies. Living on flesh and milk, their transportation was limited to the animals they rode, since their supplies conveyed themselves. The resultant mobility permitted these roaming hordes to fight and conquer in lands as distant from Mongolia as India and Bohemia.

One annal of the time reads:

> Anno Domini, 1240. The detestable people of Satan, to wit, an infinite number of Tartars, broke forth like grasshoppers, covering the face of the earth, spoiling the eastern confines with fire and sword, ruining cities, cutting up woods, rooting up vineyards, killing the people both of city and country. They are rather monsters than men; clothed with oxhides, armed with iron plates, in stature thick and short, well set, strong in body, in war invincible, in labor indefatigable, drinking the blood of their beasts for dainties.

From the Middle Ages down to the French Revolution armies were subsisted from magazines and bakeries. As a result they lacked mobility, and spent most of their days watching each other, or in besieging strong places. Great captains like Gustavus Adolphus and Frederick the Great departed from these customs, and, living more or less off the country and transporting a part at least of the needed supplies, gained great advantages through increased mobility.

The Republican Armies of France, when operating in hostile territory, lived largely off the country. They were cantoned among the inhabitants, and in the fertile parts of Belgium, Italy, and Germany were often entirely subsisted by the people. From their experience, it was learned that an army of a hundred thousand could, on the march, live off a productive and fertile country. To do so, it was necessary to move in several columns in order to cover a considerable area. But even in such rich countries as these, gathering, husbanding, transporting, and issuing the resources of the occupied land proved a difficult matter.

In less fertile countries the problem becomes more troublesome. If the population flees, destroying everything that cannot be taken along, all food as well as munitions must come from the bases in rear over the lines of communication. The invasion then becomes difficult on account of the large amount of transportation required.

> It does not suffice to assemble immense provisions, there is yet necessary the means of causing them to follow the army, and it is in this that consists the greatest difficulty, especially when it is wished to march to brisk and rapid enterprises.'

The great authority who wrote this (Jomini) knew nothing of the better means of transportation that came with the invention of steam and gas engines. When one *now* travels on the railroad from the frontier of Germany to Moscow over the same general line of Napoleon's advance of 1812, one cannot but wonder what that Great Captain would have accomplished had he had modern means of transportation to further his plans. Napoleon's failure in this campaign was not the result of loss of battles. It was due to lack of supplies, caused by a line of communications hundreds of miles long that was greatly exposed to attack. Past-masters though the French were in the art of requisition in a hostile country, they were unable to subsist themselves in denuded Russia. A disastrous retreat resulted.

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Troops on the march or in quarters should be spared all hardship and fatigue not absolutely unavoidable on military grounds. Every opportunity should be given them for access to their baggage to enable them to make full use of such articles of store as are carried by their regimental transport. But even were such considerations allowed to carry the greatest possible weight, they would never suffice to maintain troops permanently in a state of efficiency. The serious losses in men, horses, and material that invariably accompany any kind of warlike undertaking cannot be avoided even by the most judicious arrangements in the employment of troops. Certain organizations consequently become necessary to utilize the resources of the occupied portion of the enemy's country or to connect armies in the field with sources of supply at home, and to fill the gaps caused by war.

The resources of the enemy's country can, generally speaking, only include such supplies as food, forage, materials for clothing and equipment, and, to a certain extent, draught animals for the supply columns. As, moreover, all such supplies, as regards both quantity and quality, must always be of a doubtful character, any organization intended to maintain the efficiency of armies in the field must depend on properly maintained communications with home. It consequently follows that armies cannot exist for any time, at any rate, in the field without uninterrupted communications with their own country. Strategy, therefore, aims as much at covering one's own as at severing the enemy's communications. This idea has been carried so far as to lead to the saying that strategy is the art of dealing with the wants of armies. The definition, though somewhat too narrow, is, nevertheless, useful in drawing attention to the importance of the subject. Well-organized arrangements under this heading facilitate and assist the military command of armies in the field as much as do a sound tactical organization and an efficient armament.

During the wars in the early part of the last century, main and country roads were the only communications by which the wants of an army could be permanently supplied, the latter being used to transmit correspondence and the former as the lines of march of reinforcements, trains of ammunition and supplies, and convoys of sick and wounded. The reinforcements of the different arms, marching on the lines of communication, afforded at the same time immediate protection to the roads and points where magazines and "communication" stations were established. Such a system worked but slowly and clumsily, whilst armies continued to advance, and they were often obliged to check their onward movement to enable reinforcements and supplies to come up. Strictly speaking, armies could only fill up gaps and make good losses when halted for a considerable length of time, as, for instance, during an armistice.

Nowadays the communications of armies in the field depend mainly on railroads and telegraphs. Main and country roads are used only as accessories.

"Railway transport is so enormously superior in conveying large masses of men, horses, and stores of every description that it would be impossible to neglect such an important factor. Unfortunately railway traffic is extremely liable to interruption of various kinds, and the protection of lines of railroad when one is opposed to an energetic and enterprising enemy is,

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especially in hostile territory, an exceedingly difficult matter." *

Probably railroads will continue to be of prime importance, as Von Schellendorff says, but good highways have regained much of their former importance on account of the great development of a new type of mechanically-driven vehicles, i. e., those propelled by gas or oil engines.

A recent example of the influence of mechanically-driven vehicles on military operations was the great German attack on Verdun. An examination of the map reveals that a network of railroads in German possession converged on this strong place. The French had but one railroad, which ran generally parallel to and at no great distance from the north front. Probably this situation was the primary cause of the selection by the Germans of the Verdun area for the great offensive. Immense quantities of munitions having been accumulated, the attack opened with unexampled fury. The important French railroad early came under the fire of guns of large calibre and was interrupted for days at a time. The situation became desperate and the abandonment of Verdun is reported to have been seriously considered. However, a new line of communication was opened and ten thousand motor trucks for weeks and months poured supplies of food, munitions, and men from the railhead at Bar-le-Duc to Verdun, some thirty miles to the north. Twenty thousand men labored to keep the great highway in repair. Undoubtedly this new mechanically-driven transport saved Verdun.

This exploit only accentuated the general and important use of motor vehicles during the present European War. The first great rush of the Germans through Belgium to the Marne was made possible by the employment of motor-propelled vehicles of many kinds. Airplanes reconnoitred far in advance, armored motor cars helped clear the roads for the march of the columns, commanding officers and their staffs rode quickly from point to point in automobiles or motorcycles, immense guns with all their appurtenances and personnel were transported by mechanically-driven vehicles, and in the rear great numbers of motor trucks carried food and ammunition for the troops.

All went well with the Germans until, by advancing to the Marne, their lines of communication became extremely vulnerable to attacks. Gallieni's extemporized force of 70,000 by the aid of motorbuses was moved from Paris twenty-five miles overnight and made a surprise attack on the corps left by Von Kluck to cover Paris. The result is well known. It illustrates Von Bulow's saying:

> Lines of convoy are the muscles of the military body, which would become paralytic if they were sundered.

Comparatively few persons understand the difficulties of supplying armies in campaign. When such operations as those of General Sherman against Atlanta are read, little consideration is given to the transport problems involved. It is not realized that an army can be demoralized by a break in its line of communications, with the resultant lack of food and other necessaries. A soldier carries on his person two days' rations. He depends on the transport for a constant renewal of supplies. Let him be separated from these for only a short period and of necessity his efficiency becomes much lower, if it is not altogether lost.

In battle that force will be defeated whose ammunition gives out before

*Von Schellendorff.

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the action reaches a conclusion. The difficulties of keeping up the necessary amounts of ammunition for guns of all calibres has immensely increased during the last two years. Even the Germans—far-seeing as they are credited to have been—failed to appreciate the quantities of ammunition that would be consumed during modern battles. Within four months of the declaration of war they practically exhausted their supplies. Preparatory to a recent Allied advance along the Somme, one million shells per square mile of front are said to have been used. One thousand carloads of shells, or about 10,000 tons, were fired in four hours by the Germans on the small part of the Russian line in Galicia where the great drive was inaugurated in May, 1915.

It has been calculated that for a force of 1,000,000 men the ammunition trains alone would require more than 4,000 motor trucks. These, if moving in column on a single road, would extend about forty-five miles.

The reason why a mere threat to a line of communications paralyzes the action and changes the plans of an army can perhaps be best appreciated by considering the wants of modern troops and the transportation needed for the necessary supplies.

An infantry division as organized by the United States requires:

Of foodstuffs about (4 lbs. per man)	112,000 lbs. daily
Of grain, about	93,000 lbs. daily
Total	205,000 lbs. daily

or approximately 103 tons of food and forage per day. To transport these supplies, 69 motor trucks of 1½ tons capacity would be required.

The total weight of small-arm ammunition for which transportation in the division trains is necessary is about 208 tons and of field artillery ammunition about 207 tons; 277 motor trucks could carry this ammunition.

A separate division is supplied with rations and forage for seven days. The amount of animal transportation required is as follows:

Wagons	1,015
Mules	4,950
Horses	6,780

Of the horses, 4,622 are riding horses. The length of the division train is six miles.

Statistics show that during our Civil War there was, on the average, one animal for every three soldiers.

The greater the number of animals the greater the transport required. A horse eats twelve pounds of grain per day and a mule nine pounds. If all mules and horses of a division could be dispensed with, the daily transportation of sixty-three tons of forage would no longer be necessary. This illustrates one of the great advantages of the motor-driven vehicle over the horse-drawn. For each ton transported, the motor-driven vehicle requires a much less weight of gasolene and lubricating oil than the animals of the horse-drawn vehicle do of forage. In addition, the radius of action of the motor vehicle is four or five times greater than that of the animal-drawn. More freedom and mobility results to the troops dependent on motor trucks for their supplies.

A division dependent on animal-drawn vehicles for supplies cannot operate more than thirty-five miles from its base. That same division furnished with motor-trucks can be supplied at a distance of ninety miles or more. By throwing in more trucks than the normal allowance, the distance from the base can be largely increased.

"In 1846, General Taylor, who was operating on the Rio Grande, finding

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the country in his rear so infested with Mexican guerrillas and so threatened with the regular forces of the enemy as to make it impassable for wagon trains, left the 7th U. S. Infantry intrenched at Fort Brown and with the rest of his command marched back to his base at Point Isabel, twenty five miles distant, from which place his entire force acted as an escort to the wagon trains, fighting two battles before they reached Fort Brown."*

Contrast this with the operations of our motor-driven transport during the recent Mexican expedition. The troops of the United States were supplied abundantly and constantly by motor trucks over a line of communications 270 miles long. This was all the more remarkable on account of the absence of good roads and the natural difficulties of a rough and somewhat mountainous country.

There are many examples of the serious results of successful attacks or threats on lines of communications. Frederick the Great had to raise the siege of Olmütz in 1758 because of the capture by the Austrians of 3,000 wagons of his convoy. The remaining 4,000 were saved only by the employment of more than half of his army as escort during the resulting retreat.

The Second Battle of Manassas or Bull Run was brought on by General Jackson cutting Pope's line of communications, which caused the latter to fall back and fight to get in touch again with Washington.

During the Russo-Japanese War, Kuroki's army constantly threatened the Russian line of communications from Port Arthur through Liao Yang and Mukden. This seriously and adversely affected the Russian operations. The same thing was done with similar results by the Bulgarians when operating against the Turks during the first Balkan War.

Such threats as these are effective because soldiers cannot live without eating and cannot fight without ammunition. Napoleon made the following comments on this subject:

> The important secret of war is to make oneself master of the communications. According to the laws of war, every general who loses his line of communications deserves to be shot. I understand by a line of communications that in which are the hospitals, succour for the sick, ammunition, provisions; where an army reorganizes, recruits, and regains in a few days' rest its morale lost by some unforeseen accident.
>
> To change a line of operation (i. e., communications) is work for a master mind; to lose it is so disastrous that it makes the general who does so guilty of a crime.
>
> We should not abandon our line of operations (communications), but it is one of the most skilful manœuvres in the art of war to be able to change it when circumstances authorize it. An army which changes skilfully its line of operations (communications) deceives the foe, who no longer knows its rear and its weak points.

A well-known example of an application of this last principle was Napoleon's preparation, before the battle of Austerlitz, of a new line of communications leading to the west, ready to replace if necessary the one to the south connecting with Vienna. The attempt of the allied Austrians and Russians to turn the French right and thus threaten the Vienna line failed largely because they were ignorant of Napoleon's new line of communications to the west, no longer knew his rear, and miscalculated as to his weak points.

Mechanical transport makes such changes easier than they were formerly. The immense tactical advantage to an army, supplied with sufficient quantities of this new means of transporta-

*Wagner.

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tion, over one insufficiently supplied is therefore apparent.

During the two and a half years of the present great European War, mechanical transport has wonderfully developed. Judging from reports, each of the armies has from 3,000 to 4,500 motor vehicles in service. But, so far, the animal-drawn vehicles of the field and combat trains have not been replaced by motor-driven transportation.

The question of supply is such a vital one to the well-being of an army and to the success of its operation that the replacement of all animal-drawn transport in trains that operate directly with the troops has not been made. These trains frequently must leave the good roads and travel across country to the troops they serve.

The reliable mule with a stout cart is still considered available for service in places where motor transportation could not be used. It is realized that with greater experience, with better motor vehicles, and with improved roads, it may be possible finally to replace most of the animal-drawn vehicles by motor transport.

This will be a great advantage to the United States, where the automobile industry has developed to a greater extent than in any other country and where there are, widely distributed, such great quantities of petroleum. New York State alone has 25,000 motor trucks in service. The total number in the United States must be in excess of 100,000, and nine of our chief manufacturers are able to make three or four thousand motor trucks per month.

It is estimated that, for each army of 120,000 men put into the field, at least 4,500 motor trucks might be used advantageously. Thus it is seen that there are in existence to-day in the United States more than sufficient motor trucks for an army of approximately 1,000,000 men. The number on hand at the outbreak of war can be rapidly increased.

One thing to be kept in mind in this connection, however, is that the large use of motor transportation requires a correspondingly great amount of road construction and repair. Hundreds of thousands of men are busy to-day in the European field of operations building new roads and keeping up old ones.

Nothing is much more helpless than a heavily loaded motor truck in a road deep with mud. The combatants, realizing this, are doing everything possible to secure good roads, and also are keeping large numbers of animals behind their various fronts ready for use.

Tactics have been affected in a marked degree by the use of mechanical transport for large-calibre artillery, for machine guns, for the rapid transport of supplies, and for the movement of troops to critical points. Even 12-inch guns are now accompanying troops by means of motor transport. It is readily understood that a force supplied with these long-range, powerful weapons could demoralize an enemy armed with less mobile and weaker artillery before he could get into effective action.

Armored cars have developed, from the lighter types, carrying only machine guns, to the great armed tractors or so-called "tanks" which are veritable moving fortresses. These tanks have played an important part in the British offensive on the Somme.

The more mobile armored cars are extremely effective if able to get within range of hostile masses. The Germans relate that one such car carrying three machine guns caught a Rumanian battalion unawares and, opening fire at a range of 100 yards,

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killed 300 and wounded 150 men in less than one minute. This same car subsequently took under enfilade fire a large force of Rumanians constructing trenches and caused it to retreat.

The speedy reduction of the forts about Liège, Namur, and Antwerp by the fire of great howitzers moved into position by mechanical transport shows that the art of the engineer as well as the tactics of manœuvre warfare will be modified by the introduction of this new means of moving great guns. Types of fortifications of former days must be revised as a result of experience during the present struggle. Armored turrets that were supposed to be invulnerable to the shell fire of any artillery that an army could take with it into the field have crumbled and collapsed after a few shots from these modern heavy field pieces.

The very latest evidence of this development is the construction by the French of a giant gun of twenty-inch calibre that is mounted on a special railroad truck. This gun fires a projectile more than seven feet long that carries more than 600 pounds of high explosive.

Machine guns are being mounted on mechanically-driven vehicles in order that brigade and division commanders may be able to throw quickly into the action at critical points an immense quantity of fire. Since success in battle depends largely on gaining fire superiority, the importance of the resulting fire mobility is plain.

The extensive use of motor ambulances has made it possible to evacuate the wounded from battlefields much more quickly than formerly. The resulting saving in human life is difficult to estimate. The Germans claim that less than 10 per cent. of their wounded die. A great deal of the credit for this surprising result is due to the mechanically-driven ambulance. So the power as well as the mobility of armies is immensely benefited through mechanical transport.

The use of motor-driven vehicles results in the independence of the troops of their lines of communication by facilitating the bringing up of supplies and by creating possibilities for concentrations and movements which did not formerly exist. Commanders acquire thereby greater freedom of action.

This greater freedom is obtained by concentrating the mechanically-driven vehicles near the base or head of the line of communications. From there, supplies are carried as close to the troops as possible. Preferably, the field wagons are supplied direct from the advance base. Where roads are good and conditions favorable, this can be done by motor trucks without the interposition of division trains.

The same trucks may be used one day for rations and forage and the next for the transportation of men. The truck is very much better for both purposes than any other type of mechanically-driven vehicle. Passenger cars, for instance, are not economical of road space since they can carry only from five to ten soldiers, and yet they occupy as much of the road as a truck that will transport two or three times as many. Automobiles are used at headquarters by commanding generals and staff officers in connection with aëro companies and with the trains for the personnel that should be able to move quickly. But the accumulation of great numbers of them for the transportation of troops has rarely been attempted. Only under exceptional circumstances, as in rounding up the Germans in South Africa, have automobiles been employed to carry soldiers.

The principles of warfare remain the same as in the days of Hannibal,

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Cæsar, and Napoleon. Its lessons can still be learned from the pages of history.

The advent of mechanical transport has had a great influence on the application of these principles, and it is fortunate that the United States has so greatly developed this industry. In time of war, if this resource is properly utilized, a great advantage will result.

However, to get the best results, a road system far better than the one we now have must be made. Our roads should be well macadamized, with bridges and culverts able to stand the great weights of armored motor cars and heavy gun carriages. Also, there should be trunk lines strategically placed so that in case of invasion we could, by the use of our unlimited motor resources, rapidly concentrate available forces at the critical points within the theatre of action.

The Act of July 11, 1916, for extending federal aid to post roads, and the 75 millions appropriated for that purpose, is a decided step in advance. Through its provisions, the states and the Federal Government should secure a road system that will be of great benefit during times of peace and in time of war prove of incalculable value.

Having such a network of fine highways and an army properly organized, equipped, and trained, we can, with the aid of our abundant mechanical transport, exemplify the truth of Napoleon's maxim:

> The strength of an army, like the quantity of motion in mechanics, is estimated by the mass multiplied by the velocity.

In conclusion, the influence of mechanical transport in modern war may be summarized as follows:

AIRPLANES

1. The introduction of airplanes has lessened the importance of cavalry. The proportion of cavalry has been much reduced in the armies of the warring nations. The use of these air scouts in reconnaissance in conjunction with the power to move infantry rapidly by motor transportation will probably result in the permanent organization of the future armies of great European nations with a smaller percentage of cavalry than in the past.

2. By assisting in directing the fire of artillery, these types of mechanical transport make that arm much more effective and important than formerly.

3. Great changes in tactics have resulted, due to the difficulty of concealing movements from the air observers of the enemy. Flanking and turning movements are difficult of concealment except under the cover of darkness.

MOTOR TRUCKS, MOTORCYCLES, AND AUTOMOBILES

1. The distance from the base at which operations can be carried on is now three to five times what it was formerly.

2. Lines of communications are more flexible and can be more readily shifted.

3. Reinforcements can be moved much more rapidly than before to threatened points.

4. Fire power has been immensely increased.

5. Increased mobility and fire power have altered tactics. Deployments must be made sooner than formerly, concealment is more necessary, and entrenchments are of greater importance than ever before.

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The GREAT WAR

A REVIEW OF THE MILITARY OPERATIONS FROM MARCH 1 TO APRIL 10, 1917

By A MILITARY EXPERT

IN THE problem that faced the Central Powers in the early spring, perhaps the first consideration was the need of gaining time. Men they needed, too, as had been evidenced by the thinly-held lines a Verdun and elsewhere. But the time element was particularly important just then. Germany had committed herself to an unrestricted submarine campaign, as the only remaining hope of bringing England to her knees and winning a decisive victory. Every other consideration was being sacrificed to this supreme experiment, as the growing antagonism of neutral nations testified. Whether the blockade would achieve its object or not, only time could tell. Germany must occupy the time while waiting. She must find time also to reorganize her sadly battered lines in the Somme sector. That her plans for this contingency had been laid well ahead, no one doubts. We have seen in part what those plans were, how they have already involved a skilful retirement on a large scale that may be itself the beginning of a still more general retirement, how the Germans thus "won the move" and a temporary security in that sector, at the sacrifice of some thousand square miles of not very valuable territory and a somewhat impaired morale. But we cannot yet see the German strategy as a whole, cannot tell whether their retreating forces have reached that formidable "Hindenburg line," upon which they may be expected to stand.

"Fighting It Out on This Line"—The situation from the British point of view is a more simple one. There was no doubt that the British would strike; the only question was *where* and *when*. This question was partially answered in February, when General Haig made clear his decision to reopen the campaign on the ground where it had stopped in the fall. Indeed, it has seemed, from all that can be learned of the purpose of the British, that it makes relatively little difference to them where they strike, so long as they keep on striking. They have little hope of scattering the German lines by one mighty blow; rather do they aim, by incessant pounding, by continued punishment, to wear out the German armies and to break down their morale.

The Spirit of the Allies—In this connection, Mr. Frank Simonds, returning from a two months' visit to France and England, makes an interesting statement. Revising his previously formed opinion, he now says that there is in those countries no thought of a peace by negotiation in advance of a victory on the battlefield that shall shatter Prussian military prestige; and that the Allied soldier, satisfied that the German military machine is breaking down, is supremely confident of ultimate complete triumph. Mr. Simonds also describes the British army as he found it, equipped, munitioned, and cared for "as are no other troops about whom I know anything." He compares the army in France to-day to the Army of the Potomac in 1864—an im-

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mense sledge-hammer, a volunteer army made up from the best manhood of the nation, with its high commanders the best of the old regular army. "The British," he says, "are now firing four shells to the Germans' one—but the spirit remains that of the men who died at Ypres when the odds were five to one and the losses approached actual annihilation." Among the French, Mr. Simonds states, there exists no less a determination to accept no peace that does not mean the defeat of Prussian militarism.

A Victory for Democracy—To most of the world, the dramatic announcement that a revolution had been consummated in Russia came as a startling surprise. History had been marching swiftly with the Russians; the war had speeded up the machinery that was working to overthrow the Romanoff dynasty. For months the Russian armies, paralyzed by political conditions, had been unable to put forth any serious efforts; the other Allied nations considered the military situation in Russia as well-nigh hopeless. It is rather early to see clearly just how that situation will be affected by these latest developments. Certainly the new régime should combat the old inefficiency, corruption, and treachery, under which handicaps the army labored. The graft that permeated Russian officialdom, the munition scandals, the treachery that betrayed campaign plans, the pro-German influence that extended to high places—these Russia is striving to put behind her. On the other hand, a government cannot be made over in a day or a month; the country is generally unsettled and disorganized, and faces serious problems—altogether, effective military efforts are not to be expected from Russia for many months to come. An immediate effect of the revolution is to relieve from his command the Grand Duke Nicholas, the able general who defeated the Turks in Armenia.

"Berlin to Bagdad" Reversed—Beside the kind of warfare that Verdun and the Somme have taught the world, any ordinary conflict sinks into insignificance. The campaign on the Tigris, however, is somewhat extraordinary in its recent developments, and has attracted no little attention. Last month we left General Maude striding up the Tigris, after capturing Kut-el-Amara, with "seven-league boots." Knowing something of the strength and complete equipment of his army, we felt confident of his ability to capture Bagdad—a confidence that was soon justified by results. General Maude, in his proclamation to the inhabitants, couched in truly Oriental figures of speech, showed himself a diplomat as well as a soldier. This victory, taken in conjunction with the fresh Russian advances from Persia and the British expedition into Palestine, has of course a deeper significance than appears in the mere defeat of the Turks. As the British advance progresses west from Bagdad, it becomes increasingly clear that the German dream of a "Berlin to Bagdad" domain is ended; that British influence will dominate the Mesopotamian valleys; and that Russia, for her part, is to be granted, perhaps reluctantly on England's part, her long-cherished desire to possess Constantinople.

II. THE SUBMARINE CAMPAIGN

Can England Be Starved?—The unrestricted submarine campaign is now over two months old. Its success or failure is still problematical. During the period, something over a million tons of Allied shipping has been destroyed, or half the amount Germany announced as her estimated expectation. Visitors in England have found no shortage of food, except per-

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haps sugar, but the Government recognizes the existence of an exceedingly grave situation, and is taking every precaution to conserve the available supplies. One authoritative report comes that twenty-five German submarines were accounted for in the first fifteen days of the blockade, through the increased watchfulness of the British defense system. A noteworthy achievement of the German submarines in March was the sinking of the French battleship *Danton*, a vessel of 18,400 tons, in the Mediterranean.

The New Belligerent—However, effective or not in its main purpose, the submarine warfare has had a very vital result overseas. The United States is now at war with Germany. After the diplomatic break precipitated by the German Chancellor's announcement of January 31st, the estrangement between the two governments developed rapidly. When it became evident, by the sinking of the *Laconia*, the *Healdton*, and other American vessels, that Germany had no intention of sparing our merchantmen, President Wilson, with the virtual approval of Congress, gave our ships the right to arm. The disclosure of Germany's attempt to negotiate treaties with Mexico and Japan further antagonized America. On April 2d, the President appeared once more before the Congress, specially called in extra session, and, four days later, a state of war was declared to exist between Germany and the United States.

"Doing Our Bit"—The sinews of war can be roughly classified as men, munitions, and money. Of the first, the new Ally can send at present very few. Toward equipping the Entente with munitions, she can contribute to a greatly increased degree (her share to date is generally over-estimated). The United States can make her entry most effectively felt in an immediate sense by placing her vast financial resources at the disposal of the Allies, through loans which have already been negotiated. One effective way of combating the blockade—the very submarine campaign which was the direct means of bringing this nation into the war—has been undertaken in the construction of a huge fleet of wooden ships. Another contribution which, it is said, the Allies would welcome, might be a large number of aircraft and aviators, to help win and maintain for the Allies that important advantage, the command of the air.

III. GERMANY IN RETREAT

The German retirement which was carried out in February was a purely local affair which had for its result the straightening of an awkward salient. Its immediate effect was to delay the British offensive for about ten days, which time they spent in organizing the new strip of territory (which they found a "horrible quagmire") and bringing up their artillery. The village of Irles was the next objective, and its easy capture (March 9th) aroused the suspicion that the new line was merely a screen to cover further retirement. On the 12th, advancing northeast from Irles under cover of their freshly posted guns, the British found a three-mile front of the German position deserted, and passed through Loupard Wood to within two miles of Bapaume. During the succeeding days, their lines crept forward still closer to that city on the south and west.

A General Retirement—It was on March 15th that the general German retirement fairly began, and Allied advances, which for two years and more had been measured in yards, were now counted in miles. Bapaume was entered on March 16th, after a rear-

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guard engagement, and then village after village—forty in the first week—were occupied by the advancing British. Péronne, hitherto invincible, was entered on the 18th (the British lines had been extended, early in the spring, as far south as Roye). On the 19th, the British cavalry was sent out, and the pursuit continued, in the face of a heavy rainstorm.

The French Pursuit—The French advance was a shade later in starting, but, once the way was found clear, the rate of progress outstripped that of the British farther north. This may have been due to superior mobility on the part of the French, or to the somewhat more hasty retirement on the part of the Germans in this sector. By the 20th, French cavalry columns had pursued the retiring troops within five miles of St. Quentin, while the next day another French force came close upon La Fère. Two main advancing columns could be traced from the despatches—one from Lassigny through Ham toward St. Quentin, another which occupied Noyon, the chief city of the evacuated territory, then moved through Chauny up the Oise toward La Fère. In the neighborhood of Soissons, at the south end of the line, the French advance against the dominating German positions was more cautious.

Mobile Warfare Comes to Its Own—After the first surprising days of uncontested advance, the character of the fighting changed materially. German resistance stiffened, and each successive Allied advance was more sharply contested. But the old trench warfare, for the moment at least, had been discarded. Mobile tactics had come to their own once more, infantry found scope for manœuvring, the field artillery came into play, and large masses of cavalry were used intensively, as if to make up for their idleness of two years.

General Nivelle's forces continued their aggressive tactics, as they came in closer contact with the Germans, and by a rapid series of attacks strove to break down the hostile positions. Particularly did they press their advance south of St. Quentin, where they succeeded in driving a wedge into the German line (directly west of this city is the dividing point between French and English forces). At La Fère they found their progress blocked by an inundated area; the Germans had dammed the Oise and the Serre at their junction-point in order to protect this town. Still farther to the south, the forests of Coucy presented a barrier which the French took some days to turn. German attacks at more than one point succeeded in delaying or checking the French moves.

The British for their part were meeting with stubborn resistance in their slower advance at the north end of the line. Six miles from Bapaume on the highway to Cambrai lies Beaumetz. For days the fighting centred about this village, which changed hands several times. The progress of the British troops, though slow at first, was well maintained, and by the end of the month they were fairly aligned with their neighbors on the right.

The Prize—The territory thus occupied consists of a strip some sixty-five miles long and twenty-five miles deep at its widest part. It comprises over 1,000 square miles, or about one eighth the total French territory overrun by the Germans. This entire area was systematically and ruthlessly devastated before the German retirement—roads, railroads, wells, depots destroyed; even whole cities deliberately wiped out. The strength of the fortifications abandoned is said to have amazed the British who entered them. The retreat itself was admirably handled, involving as it

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did the withdrawal of an army of several hundred thousand men with a minimum of loss and without any great disaster. The German method of covering their retreats is described as being essentially different from that of the Allies. Instead of employing rear-guards of cavalry for this purpose, as do the latter, the Germans appear to leave a thin screen of infantry, their weakest troops, with their poorest equipment of machine guns and other weapons; to be sacrificed, if necessary, in order that the fittest may get safely away.

Seeking the "Hindenburg Line"—By the end of March, after two weeks of retreat, it seemed as if the Germans had reached the line they intended to hold, a position which they had had every chance to make a formidable one. This line, it was natural to suppose from the character of the streams and heights, included St. Quentin and La Fère, and passed a few miles to the west of Laon. Both the French and English were now squarely up to the supposed line. But they did not stop there. Gradually, in the first days of April, the Allies pushed closer to St. Quentin, the British on the west, where they took Savy, the French to the south and east as far as Moy on the Oise, together forming a half-circle barely two miles from the town. Meanwhile the British farther north, who were now outstripping the French in their advance, were vigorously striking along the Bapaume-Cambrai highway. Their capture on April 2d of Croiselles, a strong village close to Arras, was also noteworthy. In all this fighting, the firm resistance characteristic of trench warfare was lacking; nor did the Germans respond to the Allied attacks with the sharp counters that might have been employed. Signs multiplied, during this period, to indicate that the Germans contemplated a further withdrawal, and various were the guesses hazarded as to their eventual stopping point. On April 9th, developments on this front were temporarily overshadowed by the great British drive farther north, which is described below.

IV. THE FAR EAST

The Fall of Bagdad—After the fall of Kut-el-Amara, on February 24th, the British expeditionary force made surprisingly rapid progress in their pursuit of the Turks up the Tigris, averaging some ten miles a day. Little real opposition was encountered until the British cavalry found the Turks in position at the mouth of the Diala, a few miles below Bagdad (they had deserted a prepared position farther downstream at Ctesiphon, which marked the limit of General Townshend's previous advance). The British infantry came up on the 8th, crossed the Tigris by a pontoon bridge (the third crossing in two weeks), and engaged the Turks on the Diala line. After three days of fighting, after a night attack by bright moonlight and a battle in a blinding dust storm, the British took the last positions before Bagdad. On the morning of the 11th they entered the dismantled city, capturing many pieces of artillery but comparatively few prisoners.

The *Army and Navy Journal* finds this campaign of special interest to United States Army officers "since the conditions under which the Anglo-British troops have been fighting their way up the Tigris River more nearly approximate campaign conditions in America than those along any of the other fronts. The combination of land engagements with the gunboats aiding from the river carries us back to Civil War conditions; and there have been constant cavalry engagements such as are practically unknown in the western theatre."

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Pursuing the Turks—Since the fall of Bagdad, the British have made additional gains, though at a much reduced rate of progress, both north and west of the city. Directly up the Tigris they had advanced, by April 8th, as far as Belad, about fifty miles above Bagdad. Another force, crossing westward into the Euphrates Valley, had driven the Turks in that direction back toward Hit. The main Turkish army retreated up the Diala River to the north, followed by British forces, and rallied sufficiently to engage their opponents at Jebel Hamrin, sixty miles above Bagdad (March 25th).

The Russians Join Hands—Meanwhile the Russians, like the British, had been recovering lost ground, and their advance into Mesopotamia from Persia was well-timed to coöperate with the British advance. Hamadan was reoccupied by their troops on March 2d; Kermanshah was reached and taken on March 12th, after a two days' engagement. Finally, not without some little opposition, on April 5th, the Russians regained the town of Khanikin, which marked the limit of their advance a year ago. This put them squarely in the pass that leads down into Mesopotamia, and in the rear of the Turkish forces in the Diala valley. Russian cavalry had already come in contact with the British farther south (April 2d); the hope was raised that a considerable Turkish force might be cut off by the converging advance of the two Entente Allies. The Turks, however, seem to have avoided any such trap; being forced off their line of retreat up the Diala, they withdrew in a westerly direction toward Kifri. On April 8th, the British were reported in contact with the Turks on the line of Garfa-Deli Abbas.

Such progress as the British have made beyond Bagdad to date is not impressive, and would be necessitated in order fairly to secure their hold upon that city. Taken in conjunction with the Russian advances, however, it promises to result in a considerable farther success. In addition to the Russian column whose progress has been traced already, other Russian troops, operating farther north from Sakkiz and Bidjar, have crossed the boundary into the province of Mosul and threaten the city of the same name. Still farther away, in the neighborhood of Lake Van, Russian advances are likewise reported; the British success has encouraged their allies to renewed activity all along the line.

V. THE BATTLE OF ARRAS

A Great British Achievement—The British army has given a new measure of its real strength. On April 9th, General Haig launched a stroke at the German lines opposite Arras surpassing in its power anything the British, or perhaps any army, has ever shown. It was preceded by a concerted aërial reconnaissance; during April 6th and 7th the British battleplanes dominated the air over a region extending well back of the hostile lines, and secured no less than 1,700 photographs of the area to be attacked. The London report admits the loss of twenty-eight of the airplanes engaged in this work. A heavy artillery bombardment was maintained on the following two days, reaching its climax the night of the 8th. At dawn the next morning, the infantry swept forward over an eleven-mile front, from Givenchy on the north nearly to Croiselles. The German first line of trenches was gained without heavy initial losses; before noon these had been secured along the entire line. In the afternoon the advance continued, and by nightfall over 9,000 German prisoners had been sent to the barbed-wire pens at the British rear. The English had advanced in parts of

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the line over two miles fairly through the main German trench system. Their gain included the Vimy Ridge, which the French won in a costly attack in 1915, but failed to hold; the Canadian troops were credited with this particular success.

What It Means—The second day of the battle yielded fresh gains, particularly at the southern end of the line, where Monchy-le-Preux was carried by a well-delivered flank attack. Two thousand more prisoners were taken. The Germans seem to have taken no particular precautions to protect this threatened front, and themselves stated that it was held by only two divisions, perhaps some 35,000 men. A loss of nearly one third their number in captured is an indication of serious defeat. This was no "strategic retreat" on their part, but the forced relinquishment of one of their strongest fortified positions. Nor does it appear, as at first seemed plausible, that the British adopted this point at which to strike because their preferred sector was denied them by the German retreat from the Somme lines. The evidence rather indicates that General Haig—perhaps anticipating the German retirement from Bapaume—laid the plans for the Arras offensive some time ago, and that the German retreat had little effect one way or the other. In either event, the opening of the new campaign has been extremely creditable to the British army. It is too soon to estimate whether the success here can be decisive enough to have a determinative effect upon the lines farther south, whether the Germans must soon retire to the Lille-Douai-Cambrai line, as seems not unreasonable.

Training for War—In connection with this greater effectiveness with which the British are now fighting, this confident overcoming of former mistakes, it is interesting to find in the descriptions of the present training methods a possible explanation for these improvements. To an increasing degree the new units are trained directly behind the front, instead of at home. Instructors come straight from the trenches to give talks and demonstrations; and actual conditions of warfare are simulated as closely as possible. This idea of "the-school-of-war-at-war" has a real lesson for us at this time.

VI. OTHER FRONTS

The New Theatre of War—The Holy Land became a part of the theatre of operations when, early in March, a British force, advancing from the Suez region, crossed the boundary of Palestine. In order to munition their army and to solve the troublesome question of water supply which had baffled the Turks earlier in this region, the British are now building a railroad line along the coast as they advance. The expedition consists largely of Australian and New Zealand troops, with some English regiments, and a contingent of Indians. Automobiles and camels supplement the transportation facilities. Capturing the ancient city of Beersheba, the column next advanced to El Khalil, the ancient Hebron, where the Turks evacuated an extensive series of earthworks. Approaching Gaza on the coast, on March 26th and 27th, an engagement was fought with 20,000 Turks, which cost the latter 8,000 men in killed and wounded (according to Bonar Law's announcement in Parliament), with a loss of only 400 to the British. A division commander and staff were captured in an attack by mounted troops and armored motor cars, and only the water shortage, it was said, prevented a more complete victory. The invading column is now not far distant from Jerusalem.

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Monastir Again—The month has marked the resumption of a heavier offensive about Monastir. After five days of fighting, beginning March 13th, the French reported the capture of several positions north of Monastir, Rashtani, a village occupied in this attack, is only three miles from Monastir, showing that no considerable advance has been made beyond that city. Hill 1248, also captured but subjected to sharp counter-attacks, provides for the French a good artillery position to command the rugged country farther north. Fighting continued during the remainder of the month north and west of the city; up to the 28th, the French claimed to have taken 2,100 prisoners in the course of the offensive. There has been some current talk of discontent among the Bulgarian troops said to be due to short rations and sympathy with the Russian revolutionists.

A Russian Defeat—The most effective stroke against the Russians this year was made on the Stokhod River, on April 3d. Since the offensive against Kovel in 1916, the Russians have held the western bank of this stream, with little opposition. The German attack was launched against the Toboly bridgehead, found the Russians unprepared (two generals were relieved as a consequence of the affair), and drove them across the river, capturing nearly 10,000 men and 15 guns. This attack is typical of the superior alertness and aggressiveness the Germans have displayed all along the eastern front, which have won them several other less notable achievements.

VII. SUMMARY

Interpreting the Retreat—The German retreat has been variously interpreted. It was both a confession of weakness and a sound strategic move conferring many advantages. It surrendered territory, but set free thousands of men from the shortened lines. It testified to the effectiveness of the Allies' attack, but it paralyzed any immediate offensive on their part in this sector. It raised the morale of the advancing Allied forces, but perhaps gave Germany the necessary means of striking effectively elsewhere. Of that we can judge better when the expected German offensive has developed—either the attack toward Petrograd that the Russians fear, or in some unexpected quarter.

German Mistakes of Judgment—Altogether, the conspicuous developments of the month, the British success at Arras and Bagdad, the Russian revolution, the entrance of the United States into the war—have all illustrated what glaring mistakes of judgment Germany has made. She underestimated the strength of Britain on land, she was wrong when she judged an alliance with the Turk would win her the route to the East, she made a mistake when she calculated on peace with an autocratic Russia, and she reckoned unwisely with America when she goaded her past all endurance into entering the war.

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TRAINING *an* AMERICAN AVIATOR *in* FRANCE

THE LETTERS OF A PUPIL, FROM THE TRAINING SCHOOL AT PAU TO ACTUAL SERVICE AT VERDUN AND ON THE SOMME

By LAURENCE RUMSEY

[*Mr. Laurence Rumsey, of Buffalo, N. Y., Harvard,* 1908, *went to France in the spring of* 1915 *and for six months drove an ambulance. He then entered the French Army and went to an aviation school. In the spring of* 1916 *he was breveted and joined the Escadrille Lafayette at the front, where he remained in active service until he was taken sick in November,* 1916. *These letters give an intimate description of the training of an aviator under war conditions.*—THE EDITORS.]

ECOLE Militaire D'Aviation, De Pau, Pont-Long, le September 20, 1915.—Here I am at Pau, an *élève* pilot, a pupil. We had to enlist in the Foreign Legion, and, as soon as we signed the papers, were transferred over by order of the Minister of War. We had more red tape to go through in Paris than you could possibly imagine. From Paris we had to go to Dijon to get our uniforms. They are very good looking; sky blue in color, with orange facings and red wings on the arms.

The field, twelve kilometres from Pau, is surrounded by mountains. To the south the French Pyrenees, covered with snow, are very beautiful, and, so far, the climate has been delightful. There are many *élèves* here, and we are number 58-59; that means there are fifty-seven ahead of us before we even begin at all. It will be a month of waiting and then two months' training before we leave here; after that, about two months, on better machines outside of Paris. They take no chances of having their good machines at the front smashed by unskilled pilots. At present we are studying the engine a little, and watching the mistakes of others. You can learn a lot this way and by helping to handle the machines as they come down and go up.

Reveille sounds at 4:30 A. M. and taps at nine at night. We are regular soldiers and receive a cent a day. The first thing you get on is a little machine with wings that won't rise off the ground. It has all the apparatus of a regular one, and the idea is to go fast and keep in a straight line. It looks easy but is not, as the least shift of the wings will spin it around or turn it over. There are three grades of this type, and then one that will rise about ten feet off the ground. All this takes time, and so when you come to the real 'bus you know your engine, wings, and rudder thoroughly. The days are pretty long at present, but as soon as we start in earnest they will go faster.

September 28, 1915.—We have had a week of bad weather here because of the equinox. It is especially annoying here, as nobody can fly and so the whole work is held up. We

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hear that three more Americans are coming from the ambulances. The more Americans there are here, the longer it will take to finish up our French. We really speak very poorly for the length of time we have been here, as there always have been so many of us together. It is very quiet. The only exciting things about the place for us are the fleas. They are awful, and play tag from bed to bed.

October 6, 1915.—We have not begun flying as yet, so putter about and kill time as well as possible. It will be several weeks before we commence. In the meantime, we study the engine, watch the flying and the landing—the latter is the hardest thing to do right in aviation. Of course, there are a great many sarcastic remarks from the officers to the pupils. There is every sort of nationality represented here except those at war with France—Spain, Mexico, several South American Republics, Cuba, Japan, and Switzerland.

October 13, 1915.—We are getting better weather here, so there is more flying. We don't get any more war news here than you do, so cannot tell you anything interesting. Most of the officers here are from the cavalry, as they have better and lighter hands than the others and can manage the machine better. If I ever get started, I ought to be able to do as well as any in that line.

November 2, 1915.—I have finally started rolling along the ground on these Penguins. They have small wings, too small to take you off the ground, but with long tails which make them very sensitive to steer. You steer with your feet and do nothing with your hands as yet except keep the engine going. You have to run them on very rough ground, and the result is that you go dodging all over the lot at first. We have been held up by ten days of rain, but it is nice again now, and I think we will slide right along, as after one or two trials it seems easy enough.

November 23, 1915.—I have moved up to the third Penguin, and it is much more fun, as it goes faster and so is easier to steer. The next step will be to get off the ground about ten feet.

December 6, 1915.—I am flying finely, that is, about as high as the house. I am on the second division that goes off the ground. I was only one day on the first; it was quite easy to make a straight line, but now we are going higher and learning to land, which is more difficult. The *remous*—air pockets and little eddies—make you rock a lot at first. There are different *remous*—over water, over woods, over fields, etc. I am not at home yet at all, and feel just the way you do before a match, but this happens to all, and they say you soon get over it. I have two more divisions before real flying off and gadding about the country. We have a new captain. He is stricter than the last, and rushing things too much, they say, but you don't have to hurry unless you feel perfect confidence in yourself.

December 20, 1915.—I was just starting flying when I last wrote you, and now I am almost a flyer. I am on what they call the 50 horse-power, learning to spiral. It is quite exciting, as we go up about 600 metres, cut off the engine, and then come down turning in circles. I have not got it pat yet, but with another day's work should be able to get it all right. I

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like it very much except when there are a lot of *remous*, which bound you around as if you were on a rough sea, and then, of course, the machine is hard to manage. When I have finished the spiral, I will be ready to take my trips—two of 250 kilometres [about 155 miles] and my heights—two of about 2,000 metres each. We have had a few bad days or I think I would have been breveted by Christmas. When you are breveted, you become a corporal, and start on faster machines which will go about 160 kilometres an hour (100 miles). Six hundred metres seems pretty high as yet, but you get used to it. The view is wonderful, the Pyrenees look as if they were in your lap, and it is remarkable how far you can see on clear days.

. It is pretty cold in the air in spite of sweaters, mufflers, and lined leathers from head to foot. So far that is the worst part of flying, although at first, when we were learning to turn in the air, it was very scarey, as, of course, the machines started sideways, and you were looking right straight down at mother earth along the wing.

January 16, 1916.—I started on my triangle the 31st of December. I had almost done two sides of it when my engine went wrong and I had to come down. It was a very poor landing, and I smashed the machine into splinters. I was out in the country, and when one comes down one has to stay with the machine until the mechanicians come and cart it back to Pau. I hung around in a small village called Grenade, north of Pau, for six days. I started again on the 10th, and had almost finished my triangle and my two heights—one 2,700 metres, the other 3,000 metres—when I got lost in the clouds. I went clean into the mountains across the border of Spain, but when I saw snow I decided it was time to start north again, so came out. I had been flying four hours, and as my gas was giving out I had to come down again. Well, I had to land on the side of a hill, and the result was I smashed up entirely for the second time. I just got back yesterday and feel quite weary. Of course, they are angry, but also very nice about saying that it had been done often, and as long as I was not hurt they were very glad. It really won't do me any harm; the more experience the better for me, and I have had a lot of it in the last fifteen days.

January 25, 1916.—I received the clipping about my fall. It was not as bad as that. My engine went wrong, and as I came down I struck some bad *remous* which slung me around considerably, and I slid to about 400 from 1,200 metres. Then the engine picked up again for a bit and I got straightened out, but it stopped again soon and so down I came. In so doing, I smashed the machine but was unhurt, only a little shaken up. My hard fall was on my first trip, and the second amounted to nothing, although I did break up the machine. It is very difficult not to when you have to land in rough fields.

As you probably heard, I have been visiting a few of the towns in this part of the country, not intentionally but nevertheless I got there. They are all very old and quaint and mostly very dirty. They have a big square church on one side and village green on the other. There are only children, women, and old men about; all the middle-aged men are with their regiments. Everybody takes it as a matter of course, and doesn't seem to care whether there is war or not. The people at St. Palais, where I

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landed after crossing over in Spain, thought I was a German. They had never seen a 'plane, and no one would come near me before the police arrived and made sure I was not a foreigner. After that peasants came flocking in for miles around. The police had to stay and guard the machine all night or else they would have picked it to pieces. They wanted souvenirs.

According to the latest regulations, we will go to Amberien, just outside of Lyons, to get polished off on the machines we will use at the front. At first I understood that we were to have the "Appareille de Chasse," but now I believe they have discovered that it needs a very skilful pilot to run one of these, as it is a game of manœuvrings to fool the enemy, and a man has got to be perfectly at home in the air. We will have machines that take up map drawers or drop bombs, or go on long flies over the lines for scouting purposes.

January 30, 1916.—My tumble was *some* thrill, but I was working so darn hard with the commands that I did not have any time to think about what was going to happen until I was a few metres from the ground. I gave the thing a twist and jerk just before I hit. The left-hand wing hit first and went over my head. The shock bounded it over on the other wing, which crashed through under me. In the meantime, the motor had buried itself in the ground in front. The shock was pretty hard, and I think I was a little dazed. I remember perfectly feeling myself all over to see if I was no more. It was partly my fault, as I should have volplaned down when my motor went bad. I tried to do this, but the *remous* caught me and flipped me around, and, not being an expert, I was caught unawares. It was quite an experience. Although I hope it does not happen again, I think it was a good thing, as I had not made a single mistake up to that time and was getting a little careless. You can't relax a second on a monoplane.

I see that the Zeppelins have again raided Paris. It seems so unnecessary and they accomplish so little except to embitter the entire nation and strengthen them in their determination to stand together and fight to the end.

Ecole D'Aviation Avord, February 17, 1916.—I was finally breveted and left Pau last week for good. I am here at Avord. It is the oldest military school in France. You can hear the big guns practising all day long. I am going to take a great big Voisin biplane, which has the job of dropping bombs and carries a 2-inch gun which is supposed to bring down Zeppelins. I have sent in a request to have a Nieuport at the front. They are fast and light, and, as the American Escadrille are all going to have them, I might as well begin right off. Paris was a perfect flood—it rained every day. As to this place, it is a muck-hole: rains all the time, I hear, and blows great guns. I don't know how they ever fly.

February 19, 1916.—Now for the 'planes. I learned on a Bleriot, a very light monoplane that you have to watch every minute of the time and keeps you on the jump. In a breeze, it reminds you of a butterfly flitting around. The engine is a Gnome rotary. Some are 60 horsepower, others 80 horsepower. The 80's are all second-hand, as they come from the front. They do not consider it safe to give a rotary engine more than twenty-five hours at the front, as it may stop the wrong side of the lines.

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I also flew a few hours at Pau in a Caudron biplane, rotary Rhone engine. No use at the front, but lots of fun, and you can breathe in it without tipping over. You can ride 2,000 metres in twenty minutes and spiral down with ease. It will turn on a ten-cent piece, just like a polo pony, only easier.

At this school we get down to the machine we use at the front. I take the Voisin first, a big biplane used for bombarding. The engine is a Sampson Stationary. The propeller and engine are behind you, and it is slow and uninteresting. There are two or three machines of this type—Farman, Caproni, etc. The Nieuport is a small biplane with an 80 horsepower Rhone first class engine, about 150 horsepower with us. It will go about 170 kilometres [106 miles] per hour. It is very steady, strong and compact, and the wing stretch is small. You can take both hands and feet off the gears and let her go alone while you shoot the mitrailleuse. All 'planes at the front have a quick firer. On the single Nieuport, the gun shoots up or down as the propeller is in front. In a double one that carries two men, it will shoot anywhere in a forward direction, as the observer can stand up. This is the "Appareille de Chasse" as they call it. With a good man as pilot it is as good as the Fokker, if not better. The stories that you hear about the Fokker are true, but they usually have caught some poor unsuspecting slow buck like the Voisin. I could write forever on engines, as there are so many, but not one is as good as the stationary Mercedes with German steel. The French can't copy it and can't beat it.

February 20, 1916.—I have had one ride in the double-command Voisin. You go up with a monitor and everything is double, steering gear, gasolene, etc., so that if you make a mistake he corrects it. They do this with those that are breveted, and after a few times you go by yourself. In this way you get used to a new machine in no time. The Voisin is a big, slow biplane, and practically goes by itself. So far I don't like it, because there is so little to do and you feel as if you don't have it in hand. I have asked for a Nieuport, which is the best and fastest, but everybody is doing the same, so doubt if I get one.

Aviation Militaire Centre, De Pau, Pont-Long, le March 7, 1916.—Here I am back at Pau. I got through with the big biplane Voisin at Avord and have come down here to practise on a Nieuport or bi-motor Caudron.

Plessy Belleville, May 2, 1916.—We went into the Nieuport factory just outside of Paris, and saw five Nieuports all finished for our group, but there are nine men ahead of me, so it will be another month anyway before I leave this place. They are what they call *Bébés*, the smallest French make. It has a 120 horsepower motor, and Heaven only knows how fast it goes. One is alone in it, and the rapid-firing gun in it is stationary, so you have to point the machine the way you want to shoot. It sounds hard but they say it is pretty easy.

The Germans came as far as this, but did little damage, as when they were advancing they did not want to destroy, and were on the run when going back.

June 14, 1916.—I have my own Nieuport machine now and everything is on it, machine gun, clock, altimetre, compass, and map. I have been out several times looking over the coun-

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try and studying the lay of the land, etc., and yesterday I went to the line beyond Verdun. It was quite misty so did not see any Germans. Just as well, as I want some more practice, because the gun is stationary, and you have to aim by steering your machine. The machine is so small, light, and fast that you have only to move your feet a hair's breadth to manœuvre. From high up the country beyond Verdun looks just like a plowed field. It is all brown, and all the trees have been swept away by shells and fire. They are still fighting. I could see the blasts from the cannon. They took a crack at me, but I was at 4,000 metres and a darn small mark, especially going at 190 kilometres [about 120 miles] an hour. We are the only escadrille in which all the pilots have these *Bébés*, and we are going to try and deliver the goods.

June 27, 1916.—Bar-le-Duc is in a valley, quite a pretty town. We live in a villa overlooking the town. It belonged to an artist, as it has a studio with skylight, etc., is surrounded by gardens, and it is very pretty and pleasant. We all eat together, two majors, two captains, two lieutenants, and about ten of us. We are more careful now about attacking escadrilles over the German lines. Also we are flying together better than at first, and have some sort of system, and are not flitting all over the heavens.

[NOTE: Rumsey was promoted to a sergeant on June 28th.]

June 28, 1916.—Well, we have been seeing and tasting something of real fighting, and it is very exciting indeed. The artillery at the forts around Verdun is very powerful and numerous. It kicks up the dust for over two miles and it is dangerous to get into it, because we might lose each other and also get our carburetors full of dust, which means motor trouble. We travel at about 3,500-4,000 metres. When they are shelling each other on the ground, the Germans don't trouble much about shelling us in the air. We have to be careful about a very fast new machine they have out. It is faster than our fastest, carries two men, two machine guns, has two planes and a 220 horsepower Mercedes Benz stationary engine. That is why we are very careful now about staying together, as the two men we have lost got separated from the bunch and had no show. When it is good weather, we go out twice a day to the lines for two and a half hours, making five hours a day. It is pretty tiring, so now they have brought another escadrille to help us, and we do not go out so often. It is a great nerve strain.

July 12, 1916.—We are still here at Bar-le-Duc, flitting up and down and trying to entice a non-suspecting German near enough to our lines so that we can go after him. They very seldom come across, except in swarms, and then they beat it back quick before we are up or else to some other part of the line. We go up twice a day officially, and whenever we want at other times, but that is not often, as we usually sleep or relax as much as possible in between times.

The Japs are over here as thick as thieves, learning a lot.

July 29, 1916.—Two Frenchmen brought down a German 30 kilometres [19 miles] within our lines yesterday. The pilot had been wounded but landed without breaking his machine a bit. It was a new kind of Albatross bombardment machine. We all went over and it was interesting looking over. A big stationary Mercedes en-

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gine, two men, two machine guns, and very well finished.

September 20, 1916.—We are at Luxeuil-les-Bains, near Switzerland. We did not go to the Somme after all, and all are disappointed. We had to fly over the Vosges to get to the line here, and it is quite far. The captain took us along the line yesterday, showing all the landing places. It was very interesting, and the Vosges are very beautiful. They are not so very high, and are covered with large pines, much like the Adirondacks. We will probably be here all winter.

October 20, 1916.—We had hard luck in Luxeuil; we only went there for the raid. I was not in it. Only four machines went over. We have now changed to the Somme. We are out in the country about 20 k. m. [12½ miles] from Amiens, sleeping on the floor of barracks. I think we are in for the real thing now. The English and Canadians gave us a good-bye party at Luxeuil, and all seemed to be sorry that we were going. They tried to get us attached to them. From here you can hear the big guns, just the way we could when in Belgium, only more so.

November 1, 1916.—We are getting settled here very slowly, but we are not really comfortable yet. The barracks leaked on top, sides, and floor. It does nothing but blow and rain, so at first we were uncomfortable, but now we have fixed the roof, papered the walls, and plugged up the floor. We also bought some oil stoves, so it is much better. We are 17 k. m. east of Amiens, which is the English headquarters. I went down to the general reserve the other day to get myself a new machine, latest type, 110 horsepower, 200 k. m. [124 miles] an hour; climbs to 4,000 metres in less than ten minutes. It seems like a bear-cat.

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ITALY'S PART *in the* GREAT WAR

THE CAMPAIGN OF 1916

By ALBERTO TARCHIANI

[*As correspondent of "La Tribuna" Mr. Tarchiani has been at the Italian front since April, 1916. He writes of Italy's contribution to the cause of the Entente Allies from the Italian point of view.*—THE EDITORS.]

WHEN Italy, with full knowledge of the immense sacrifices which she faced, entered the war in May, 1915, the task that awaited her army was a difficult one. Operations were started when conditions of the European War were, on the eastern front in Russia, decidedly favorable to the Central Powers. The Italian boundary was that which Austria had imposed in 1866 and was threateningly unfavorable to Italy. The Italian army found itself face to face with three Austrian armies, consisting of twenty-five divisions of the best troops of the Monarchy, and was compelled to take the offensive along the entire front of about 800 kilometres (496.8 miles). Concentration on the Isonzo front was effected in order to maintain a line of resistance and to assume a position from which to make a sudden attack on advantageous ground. At the end of 1915, after eight months of war, the Italian army, having maintained the initiative, had conquered important regions in the Trentino and Cadore, and in some places crossed over the line of the Isonzo. Thirty thousand prisoners and large quantities of war materials had fallen into its hands. Enormous efforts were required to attain this strong position, especially on the part of the infantry, which was compelled to overcome the deficiency, not yet remedied, of the mechanical equipment at its disposal. Such was the condition of affairs at the opening of the campaign of 1916.

The first obstacle, successfully overcome, was the winter campaign. This necessitated a new, imposing organization of equipment and supplies capable of insuring the health of the entire army fighting at an altitude of 2,000 to 3,000 metres (6,500 to 9,800 feet) above the sea level, with a temperature as low as 22 degrees centigrade (about 10 degrees Fahrenheit) below zero.

All the first line trenches had to be lined with wooden planks, troops in the second line quartered in barracks, hot food supplied, the ration increased, and special equipment provided. For a single corps operating in the mountainous region it was necessary to furnish 300,000 planks, of which 100,000 had to be carried up by the soldiers; 200,000 coverlets and as many pieces of underwear, shirts, woolen hosiery, and woolen mitts; 80,000 winter overcoats; 60,000 fur chest protectors, and 10,000 bags of fur. These items will give an idea of the immense quantities of wrappings and other materials that were necessary.

While our troops, braving the cold, the snows, and the rains, were maintaining in January and February operations calculated continuously to harass the enemy and compel him to be al-

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ways alert, our navy and the Italian troops in Albania took upon themselves the difficult task of saving the surviving portion of the Serbian army, which had been compelled to retreat toward the Adriatic coast. This task, difficult and slow, was menaced by the torpedoes of the enemy, from their secure base at Cattaro; and its success, together with the recent participation of the Italian troops in the taking of Monastir, constitutes the best proof of the aid that Italy was able to give Serbia, thus furnishing Serbian commerce the natural outlet it required, and demonstrating the falsity of all attempts made to belittle Italy's domination of the Adriatic.

Approximately 260,000 men and a vast number of horses and mules were transported by a concerted movement of 250 ships, while 300,000 quintals (33,000 tons) of material required the service of 100 additional ships. During these movements nineteen submarine attacks, in addition to other torpedo operations, were vainly attempted by the enemy.

During the first part of March the Italian Supreme Command deemed it essential to initiate a strong offensive all along the line in order to render impossible the cutting off of part of our troops, particularly our artillery, by the enemy. This operation was started on the 7th of March in the Cadore and continued violently with successful results along the entire line of the Isonzo until the 17th of March. The Austrian Command asked and obtained reinforcements with the view to attempting counter-attacks, which were finally begun on the 26th of March in the Carnia and on the Isonzo and continued until the 30th of March. The resistance of our troops rendered all these attempts fruitless, and more than 800 prisoners and considerable war materials were captured.

In April the contest was begun in the high mountains and our Alpine troops captured enemy positions at over 3,000 metres (9,800 feet) in altitude in the Adamello region and on the lower Isonzo, heretofore considered impregnable. In one single battle in the Monfalcone region, 1,300 prisoners were taken, of whom forty were officers, besides two cannon and considerable war materials.

Simultaneously an aërial raid was attempted by the enemy with numerous machines, but our defensive and counter-offensive aërial attacks were victorious, and in nine days thirteen Austrian airplanes were captured and destroyed.

In the meantime the Austrian Command was laying plans for an offensive, on a large scale, in the Trentino, which, in accordance with its title of "Punitive Expedition" was, after crossing the salient of the Trentino which wedges into our territory, to swoop down on the plains and attack in rear the Italian army that was fighting on the Isonzo, and thus compel Italy to sue for peace.

In conceiving this gigantic plan, the Austrian Command staked success on two errors: first, in assuming feeble resistance on the part of the Italian army; second, in counting on the impossibility of an offensive move on a large scale by the Russian army which had been stopped by the combined action of the Central Powers between the 1st and 15th of January on the Bukovina front. The Austrian Command, after its setback on the Russian and Balkan fronts, found itself dependent on the German General Staff and hoped by means of the "Punitive Expedition" to redeem itself by a wonderful success in Italy; a success of greater importance in view of the failure of the Germans at Verdun.

During the first week of May the

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invading corps, consisting of 400,000 men, more than 2,000 cannon, half of medium calibre, forty pieces of 305 millimetres (12 inches), four of 380 millimetres (14.96 inches), and four of 420 millimetres (16.53 inches), massed along a front including the regions between the River Adige and the River Brenta. This imposing body of soldiery and artillery was the flower of the Austro-Hungarian army, picked troops and cannon taken from the Russian and Balkan fronts, and was provided with everything, even to the sending of officers whose duty was to collect and take objects of art from our Italian cities and ship them into Austria.

The entire plan met with rapid and total failure. The infantry assault, immediately following the formidable bombardment, reached its maximum intensity on the morning of May 15th. It was violent along the entire line, but particularly so on the right wing of the Austrians, because the enemy endeavored to dislodge us from the positions commanding Rovereto, and also because a complete success by their right wing would have decided the outcome of the offensive action by permitting the invaders to cross a smaller tract of territory to reach the plains at Schio. Here the plan was to advance on the rear of our troops that were defending the regions including Terragnolo, upper Astico, and the Altipiano of Asiago. Four days afterward, on the 19th of May, the Italian troops, after an orderly falling back from their advanced positions, were strengthened on the line Coni-Zugna, Passo di Buole, and, aided by the strong positions on the Pasubio, still remained on enemy territory, successfully repulsing all attacks, and checking the right wing of the Austrian army.

The Austrian left wing suffered the same fate. Here the enemy's purpose was to throw our army back from the positions occupied on the Borgo and in Val Sugana and compel a retreat in order to force it to the open plains. Instead, from the 15th to the 25th of May, our troops were able to retrace their steps in an orderly manner and strengthen themselves, still on enemy territory, along the entire line of resistance of the Maso toward Cima and Cima Rovetta. Thus four days after the offensive began the right wing of the enemy was checked, and eleven days later the left wing suffered the same fate.

Consequently, whatever benefits were obtained by the enemy's progress in the centre, where our lines were compelled to draw back, leaving them the mountainous regions and the woodlands with the inhabited centres of Tonezza, Arsiero, and Asiago, were greatly minimized by the heavy losses and enormous sacrifices they sustained in Val Terragnola and on the Altipiano of Asiago.

The Austrian offensive was compelled to diminish its force without freeing itself from our menacing army on its flank, and even though the enemy, furnished with powerful artillery and numerous battalions, compactly launched to assault, could boast of partial success during the last fifteen days of May, on the 2d of June, precisely eighteen days after the start of the action, the Italian Command, as was announced in the Bulletin of the 3d of June, considered the offensive "completely checked along the entire front of attack." In fact, on that day not only all the necessary reserves had reached the battle line, but a new army was grouped on the plains, ready to attack the enemy should he renew his efforts and open fire at Bassano and Thiene. In a little more than two weeks, the task had been accomplished; 82,000 rail-

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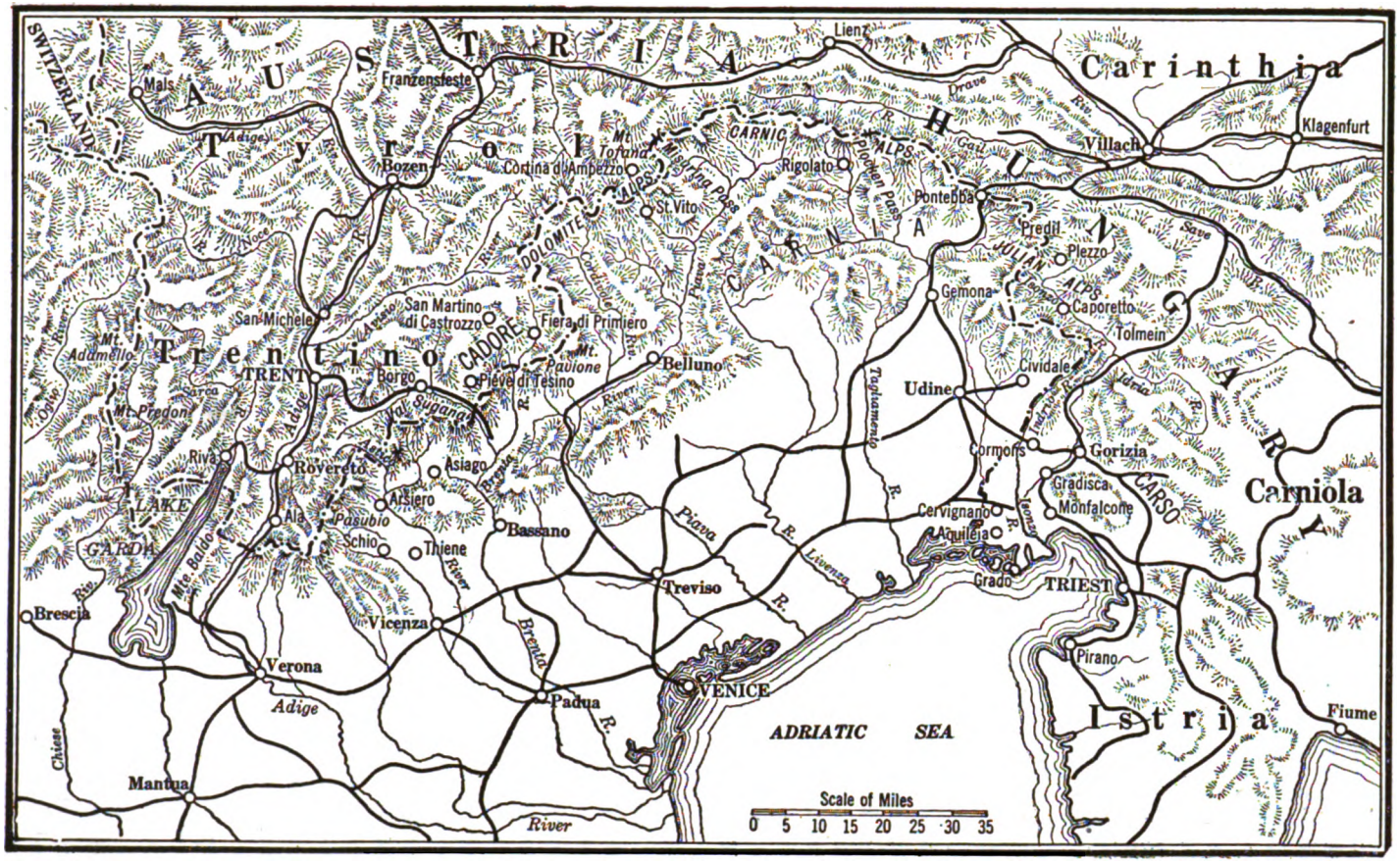

THE THEATRE OF THE MAJOR OPERATIONS OF THE ITALIAN ARMY

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road cars and more than 1,000 motor cars, operating continuously, transported 500,000 men, 75,000 horses and mules, 15,000 cars, artillery, foodstuffs, ammunition, medical supplies, tools, and implements of all kinds toward the menaced region.

All the difficulties which a mountainous region without water presented were overcome, and the enormity of the task can only be comprehended by the fact that every day 450,000 litres (about 120,000 gallons) of water had to be taken up to the plateau.

On the 2d of June, the first fundamental error of the Austrian Command, namely, their judgment regarding the feeble resistance of the Italians against their offensive action, became evident, and on the same day the Italian Command gave the order for the counter-offensive movement.

Two days later, on the 4th of June, the Russians initiated their offensive, demonstrating the second grave error of the Austrian Command in considering it certain that the Russians could not again take the offensive. This error caused the withdrawal of the best troops and artillery from the Russian front, leaving only regiments supported by poor artillery, whose loyalty to the Dual Monarchy was doubtful. These two facts were demonstrated clearly by the taking of 400,000 prisoners and poor artillery by the Russians. The Austrian Command, in order to organize the drastic "Punitive Expedition" against Italy, had left on the Russian front a contingent that they considered would not be drawn into battle, but which resulted instead in their being completely wiped out at the first Russian attack.

These facts, and the dates above stated, clearly show that the Austrian offensive was already a total failure when the Russian offensive started and that German intervention was necessary to cope with the Russians, both on account of the difficulties of transportation and the distance between the two zones of activity, and also on account of the necessity of facing the fresh forces of the Italians. The Austrian Command did not find itself in a position to send strong reinforcements from the Italian to the Russian front. But what demonstrated more fully the total failure of the enemy in addition to the loss of over 100,000 men and the weakening of their entire army was that in June the Italians initiated the greatest and most successful period of the activity of their army. At this time a military critic of the Allies stated, after a visit to the Italian front, that it would be absolutely impossible for our army to begin this great offensive action, but it is only necessary to enumerate the operations accomplished by the Italian army to disprove this claim. On the 16th of June a counter-offensive attack by the right wing of the Italian army began, and on the 22d of June the offensive on the left wing started just where the enemy had totally failed. On the 25th of June the Austrians were compelled to retreat in the centre and the Italians, by their continuous methodical manœuvres, which were persistently followed until the middle of July, regained Arsiero and Asiago, brutally devastated by the Austrians, taking about 6,000 prisoners, 102 officers, ten cannon, fifty rapid-firing guns, and other war materials.

Contemporaneously in July, the Italian Command started operations that brought into its power the massive Alps of Fassa, constituting a real menace to the side and the rear of Trent.

Unable to count upon the valor of their men, the Austrians on the 29th of June essayed an attack with asphyxiating gases, on the Carso, more

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formidable in character than had ever before been attempted. Their men were furnished with iron mallets to strike to the death Italian soldiers that had been partially overcome by inhaling the gases. This attack failed, due to the admirable counter-attack of the Italian soldiers, which brought them 400 prisoners. But, whether due to the counter-offensive manœuvre (the conquest of the Fassa Alps) or to some minor action such as the achievement of exploding the enormous mine under the Mountain of the Casteletto delle Tofane, of 2,000 metres (6,500 feet) altitude, it is essential to know that these operations had not impeded the preparation of the great offensive on the Isonzo. In fact, it can be said that they only screened the preparations under way on the Isonzo front.

When our troops, on the 4th of August, detached Division 85 on the east of Monfalcone, in order to insure this position of the wing, at the same time distracting the attention of the enemy, this was considered a partial offensive move.

On the 6th of August, when our artillery and bombarding batteries (the new arms prepared by the Italian army) opened formidable fire from the Sabatino to the sea, the enemy was completely surprised.

On the 6th the pillars at the head of the bridge at Gorizia were taken. General Boroevic, commanding the Austrian army, made a desperate appeal to his troops, but on the 7th and 8th the attack continued without diminishing and during the night parts of the brilliant Casale Brigade forded the Isonzo. On the 9th the Italian troops entered Gorizia and on the 10th the western slopes of the hills on the east of Gorizia were occupied by our soldiers. Simultaneously on the Carso, between the 6th and the 9th of August, San Michele was conquered; on the 10th day all the Carso region to the Vallone, formidably fortified, was abandoned by the enemy. On the 11th day the Italian soldiers crossed the Vallone and entered Oppacchiasela.

The fall of the fortress of Gorizia and the conquest of the first bulwarks of the Carso constituted a military action of the first order, not only for its value and intrinsic importance, but especially for its preparation.

This preparation was started on the 9th of June, when the counter-offensive in the Trentino had shown good results, and continued to unfold methodically until the 27th of June. During this period the Italian Command, having determined upon the plan of the vast manœuvre between the Trentino and the Isonzo, entrusted the execution of the offensive to the Command of the Third Army Corps under orders of the Duke of Aosta, Emanuele Filiberto di Savoia. He outlined the operations in detail, taking into account all the forces and artillery that were to be assigned to this new offensive, without previously removing from the Trentino the best parts of the essential troops still needed for the operations. He arranged everything in such a manner that when, with extreme secrecy, between the 17th of July and the 4th of August, the movements that led the troops and artillery to the Isonzo front were executed, it took only two days to bring them to their assigned places, fitting in perfectly with the troops already on the spot.

Thanks to this movement, two months after the Austrian offensive the Italian Command succeeded in accomplishing victoriously an operation of magnitude holding first place among all those attempted by theAllies against the Central Powers. About 20,000 prisoners, thirty cannon, and an enormous quantity of war materials

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were left behind by the Austrians and fell into the hands of the Italians.

During the month of August the Command of the Italian troops in Albania occupied Porto Palermo and the coastal region of Kimara and prepared the occupation of southern Albania.

On the 25th of August a strong contingent of Italian troops was landed at Saloniki.

On the 27th of August Italy declared war on Germany.

These were the results of the "Punitive Expedition" of the Austrians. From this moment the Austrian Command lost all initiative capacity, as their operations from September to the end of the year clearly proved.

During the months of September and October long and courageous operations took place in the high mountains. These brought into our possession the Cosmagen Alps at the north of the River Pasubio, and increased the territory held by us on the Fassa Alps. During September, October, and November, notwithstanding the intervals imposed mainly by the violent inclemencies of the weather, the offensive was renewed in the Carso with the conquest of a strong salient to the south of the Frigido. This menaced the Austrian position in the southern Carso, defending the road to Triest, and we captured nearly 22,000 prisoners and considerable war materials. In October the entire Epiro Albanese was occupied, in order to establish the connection between Valona and the army at Saloniki.

In Macedonia the defense of the Vardar sector, Lago Doira, and Struma was entrusted to part of the Italian troops, while others bravely participated in the taking of Monastir. Consequently in a short space of time the Italian contingent brought an important contribution to the army of General Sarrail.

The effort of the Italian army, compelling the enemy to maintain always intact a minimum of thirty divisions along its entire front and sometimes increasing to forty-three divisions during the offensive, has reclaimed over 3,000 square kilometres (1,157 square miles) of territory, and has to-day nearly 85,000 prisoners of the best troops of the Dual Monarchy.

In the mountainous region of the Trentino on the upper Isonzo we occupy about 1,760 square kilometres (689 square miles) with sixty-four communities, that before the war mustered nearly 90,000 inhabitants, and among which the principal centres are Ala, Strigna, Pieve di Tesino, S. Martino di Castrozza, Fiera di Primiero, Cortina d'Ampezzo, Plezzo, Caporetto.

In the Carso region and the Isonzo we occupy 1,400 square kilometres (540 square miles) of territory and eighty-eight communities, inhabited before the war by 170,000 people. Among the principal centres of this region are Cervognano, Monfalcone, Cormons, Gradisca, Aquileia, Grado, and Gorizia.

The strategic value of the conquest is given by the advantage obtained in shortening our boundary to about 600 kilometres (372.6 miles) from about 800 kilometres (496.8 miles).

Equal to the efforts of the army were those of the national organization for war production and the furnishing of necessary financial aid. The industrial organization for war production that can give useful fruits also after the war has not as yet reached its maximum development. The maximum results will be obtained in the spring of 1917, but the war industry to-day in Italy is in a position to give important aid and contribute war materials to the Allies and can be figured as follows:

There are sixty-six military establish-

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ments with 21,645 workers, of which 12,474 are women, and 931 auxiliary establishments with 344,702 workers, of which 55,533 are women. Of these factories ninety-one produce metallic material, 489 cannon, airplanes, automobiles, projectiles, bombs, shells, etc., 382 factories manufacture explosives, chemical products, mineral and extractive materials. To these must be added 1,182 establishments all practically destined to the manufacture of projectiles, with 30,269 workers, of which 4,598 are women. These total up to 2,179 establishments, with 396,616 workers, of which 72,605 are women. These figures to-day, in their continuous geometrical progression of the production of war materials, are already surpassed.

Italian finance, thanks to the solidity of the Budget, to the increasing number of contributors, and to the rigid administration assuring payments of the interest of the loans contracted, has been able to furnish the necessary means for the war. And this has cost Italy to date 16 billion lire (about $3,000,000,000) of which 780 million lire (about $155,000,000) represents aid in the support of the families of those recalled to the colors.

War has not arrested the normal life of the country, notwithstanding that it has imposed and counseled economies; the expense of the Budget outside of the cost of the war increased in 1915–1916 to 3,260 million lire (about $650,000,000), of which the sum of 37 million lire (about $7,500,000) was appropriated toward the relief of sufferers in the earthquake of Marsica; 89 million lire (about $17,500,000) for the colonies, and 21 million lire (about $4,000,000) for the transportation and assistance of Italians recalled to the colors.

The economic resistance of the nation to its new burden is solid. For the army of 1917-1918 an increase of 832 million lire (about $165,000,000) is anticipated.

Italy can, therefore, contemplate with just pride the task accomplished in the year 1916; a task involving not only the reclamation of her lost territory, with solid energy and firm determination, but also a material contribution toward the European cause of the Quadruple Entente, thus making her worthy of the name of a Great Power, destined to be one of the greatest factors of civilization in Europe and the entire world.

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The SERVICE RIFLE*

By CAPTAIN RALPH M. PARKER
(*2d U. S. Cavalry*)

IN THE preparation of these notes on rifle firing, with the service rifle, an effort has been made to answer many questions that present themselves to the inexperienced. A few of the most important questions on the subject are herein asked and answered in such a manner, it is hoped, as to make each point clear to the average mind.

1. What is meant by the "rifling" of a firearm?

A. The spiral grooving of the bore.

2. What are the lands?

A. The raised portions of the bore between the grooves.

3. What is meant by caliber?

A. The diameter of the bore between the lands.

4. What is the caliber of the U. S. Army rifle?

A. .30 ($\frac{30}{100}$ of an inch).

5. What is the purpose of rifling?

A. To cause the bullet or projectile to rotate about its longer axis.

6. Why is it desirable that the bullet rotate about its longer axis?

A. So long as the bullet rotates about its longer axis at a high rate of speed, it will not wabble or turn end over end.

7. Why is it necessary that the bullet should not wabble or tumble?

A. Every motion that the bullet makes, not directly in the proper line of flight, increases, unnecessarily, the amount of resistance to be overcome in its passage through the air.

8. Why is a bullet elongated and pointed instead of spherical?

A. A bullet of this shape meets with less resistance, on account of its smaller cross-section and the ease with which the point penetrates the air, than does a spherical bullet of the same weight.

9. Describe the action of the explosive upon the bullet.

A. The powder is so made that its combustion is completed as the bullet reaches the muzzle of the rifle. This causes a steadily increasing pressure, upon the bullet, so long as it is confined within the limits of the bore, which reaches its maximum just before the bullet leaves the muzzle. There is a common belief that the powder explodes all at once, but this is not so. Were this the case, a rupture of the rifle barrel would result.

10. Describe the flight of the bullet.

A. The bullet describes a curve which is constantly changing and becoming more pronounced as it approaches the end of its flight. In addition to this curve in a vertical plane the bullet deviates laterally from the line of the axis of the bore.

11. What causes the constant changing of the shape of the curve?

A. This change is due to the decrease in the forward velocity caused by the resistance of the air and the increase of the downward velocity caused by gravity during the flight.

12. What causes lateral or horizontal deviation?

A. The downward deviation of the bullet from the line of the axis of the bore causes a compression of the air under it, and a corresponding rarifying

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of the air on top. The rapid rotation of the bullet to the right causes it to roll, as it were, on a cushion of compressed air beneath it.

13. How is the effect of gravity offset? A. By directing the bullet toward a point higher than that to be hit.

14. What is the principle upon which sight elevation is based?

A. The sight elevation is so arranged that when the sights are aligned upon the point of aim, the axis of the bore prolonged will pass through the plane of the target at a point whose distance above the centre of the bull's eye is equal to the distance through which the bullet will fall during the time of flight.

15. How is lateral normal deviation corrected?

A. The rifle has a right-hand twist, and the drift proper is therefore to the right. There is, however, a slight lateral jump to the left, and the total horizontal deviation of the bullet, excluding wind, is the algebraic sum of the drift and the lateral jump. The trajectory is found to be very slightly to the left of the central or uncorrected line of sight up to a range of 500 yards, and beyond that range to the right of this line. In order to minimize the deviations at the most important ranges, the drift slot on the sight leaf is so cut as to make the trajectory cross the adjusted line of sight at a range of 500 yards.

16. What is meant by "twist"?

A. The spiral formed by the grooves in the barrel of a rifled firearm. In the United States magazine rifle, model 1903, this twist is uniform, one turn in 10 inches.

17. What is meant by the "normal" sight?

A. The alignment of the top of the front sight between point of aim and the centre of the top of the rear sight notch.

18. Describe the peep sight.

A. In using the peep sight the top of the front sight is aligned between the point of aim and the centre of aperture.

19. Why are these methods of sighting insisted upon for military shooting?

A. Because the object of the training is to develop in the soldier not only accuracy but endurance. The use of fine sights cannot be continued for long-continued and rapid firing without great strain and fatigue to the eye. As the eye becomes weaker it will become difficult for the firer to measure the tip of the front sight as accurately as before, with the result that more front sight will be taken. This lack of uniformity in sighting is fatal to good shooting.

With the normal sight and the peep sight a large portion of the front sight is in view, and while aiming, any deviation of the top of the front sight from the line joining the centre of the peep hole or the centre of the top line of the rear sight notch will be plainly visible, without taxing the eye unduly.

20. What is the battle sight?

A. It is the position of the rear sight with the leaf laid down.

21. What is the idea of the battle sight?

A. During the fighting at ranges under six hundred yards conditions are not favorable to the changing of sight elevation, and for this reason the soldiers are taught to use the sight at this elevation for all firing from about 550 yards down to point blank range. By learning where to aim in order to get hits at these ranges, the necessity for changing the sight adjustment is obviated. At 547 yards and under, the trajectory of the bullet is so near the ground that the entire space is covered by a grazing fire, the highest point of which is not above the head of a man in the kneeling position.

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22. What is the effect of a bright sight upon shooting?

A. The rays of light reflected from the bright sight make the edges of the sight appear blurred. The front sight will also appear to be slightly higher than it really is, which will cause the axis of the bore to be somewhat depressed when the sights are aligned, and have the effect of lowering the elevation.

23. What is done to correct the brightness of the sights?

A. They are blackened by smoking with a candle, or gum camphor, or by applying some sight blackening compound which will give the sights a dead or dull black appearance incapable of reflecting rays of light of a nature to interfere with clear vision.

24. When firing from the prone position at 500 yards, what is the height of the top of the curve described by the bullet? A. About 28 inches.

25. At what distance from the muzzle is the highest point of the curve described by the bullet, when firing at 500 yards? A. 270.56 yards.

26. What is the maximum range of the rifle? A. 4891.6 yards, or about 2⅞ miles.

27. What is meant by the "aiming point?" A. The point upon which the sights are aligned, when aiming.

28. How is the wind direction described on the range?

A. As a 12:00 o'clock, 2:00 o'clock, 3:00 o'clock, etc., wind. For this purpose the firer is supposed to be in the centre of a great horizontal clock dial with the figure 12 toward the target. The wind is then said to be a (such) o'clock wind according to the imaginary figure on the dial from which it is blowing toward the firer.

29. How is wind velocity determined?

A. By the use of an anemometer and by estimation. Proficiency in estimating wind velocity is attained by much practice in estimating and in comparing the estimates with the readings of the anemometer.

30. What is the rule for making windage correction when the amount of error is known?

A. Number of inches of error divided by the product of the number of hundreds of yards of the range and 4, equals number of points of windage to be taken.

Example: Firing at five hundred yards the bullet strikes a point on the target 24 inches to the right of the centre. We have: number of inches or error equals 24, number of hundreds of yards of range equals 5. Divide 24 by (4 x 5) or 20 and the result is 1⅕, which is the number points of windage necessary to correct the error.

Each soldier should remember that for each hundred yards of range one point of windage causes a change of 4 inches on the target. At 100 yards 1 point makes a change of 4 inches, at 200 yards 1 point makes a change of 8 inches, and so on for all the ranges.

31. What is the rule or formula for ascertaining the amount of windage necessary for firing the first shot when the wind is considerable?

A. Range in hundreds of yards multiplied by the estimated velocity in miles per hour, divided by 10. This is for 9 and 3 o'clock winds. Winds from 2, 4, 8, and 10 o'clock require very little less windage than the above. Winds from 11, 1, 5, and 7 o'clock require one half the above amount.

32. How is wind direction determined?

A. By noticing the direction of the smoke from neighboring houses, the direction of the clouds, the direction of the mirage, by tossing dust or dead leaves or grass in the air, by holding a handkerchief or strip of cloth for the

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action of the wind, or by the feel of the wind against the face. When the wind velocity is very low moisten the finger in the mouth and hold it up. The side from which the wind is coming will be noticeably colder.

33. What is meant by "canting" the piece?

A. Any position of the rifle, when aimed, in which the sights are tipped to one side or the other out of the vertical plane.

34. Describe the effect of canting the piece.

A. Moving the sight to the right or left out of the vertical will have the effect of taking windage. This changed position of the sight will also be somewhat lower than if it were directly above the axis of the bore. To show these two effects of canting the piece let us assume that the piece is canted so that it is lying on its side. In this position it will be seen that there is no longer any elevation since the rear and the front sights are in the same horizontal plane. Also it is very plain that in this position the difference in the distances of the front and rear sights from the axis of the bore has the effect of giving an excessive windage or lateral deviation from the aiming point. In order to illustrate this to a beginner, simply fix the rifle in this position with the sights aligned upon the aiming point. Then remove the bolt and look through the bore of the rifle and see the point in the plane of the target that the line of the axis of the bore will intersect. This point will be to the right or left of the aiming point a distance equal to the amount of elevation given the bullet were the rifle fired without canting it. With no elevation, therefore, and with excessive windage, the bullet will strike to the right or left of and below the aiming point.

35. What is the effect of wind upon the flight of the bullet?

A. The force of the wind acting upon the bullet tends to carry it out of its normal path.

36. How do the winds from the various directions affect the flight of the bullet?

A. Winds directly from the front retard the bullet; from the rear accelerate; from the right or left cause a left or right deviation; from the right or left front cause a lateral deviation to the left or right and also retard the bullet; from the right or left rear cause a lateral deviation to the left or right and accelerate the bullet.

37. How is lateral deviation caused by the wind corrected?

A. By using the windgauge screw to move the rear sight toward the side from which the wind is coming.

38. How is the retarding and accelerating effect of the wind corrected?

A. By increasing or decreasing the elevation of the rear sight.

39. What makes a rifle shoot higher when it becomes heated?

A. The heated condition of the barrel makes the combustion more complete. The gases expand with just a little more force in the heated barrel. There are other reasons advanced by many for this increase in elevation, such as the slight elongation of the barrel and the effect of the heat upon the diameter of the bore. These also are reasons for very slight changes but not sufficient for the amount of change that takes place in firing when the rifle first becomes warm.

40. What is meant by the zero of a rifle?

A. It is impossible to manufacture, at reasonable cost, large numbers of rifles exactly similar in every respect. The testing of all the rifles made for the Army by long and expensive pro-

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cesses is entirely out of the question. Some of the rifles, owing to slight inaccuracies of manufacture, require a slightly different sight setting than is normal for the rifles generally. This sight setting which gives normal results under normal conditions is what is called the "zero" for the particular rifle requiring such sight setting. This applies to both elevation and windage in some cases.

41. What is "mirage"?

A. Heat waves observed on the target range on warm days.

42. What effect has "mirage" upon firing?

A. If there is no wind blowing, the mirage will move straight upward and will give the bull's eye the appearance of being oblong, the longer axis being vertical. The entire target will appear to be elongated vertically, which will make the bull's eye appear higher than it really is, and necessitate a lowering of the elevation. When a wind is blowing gently the mirage, in addition to rising, moves with the wind and causes the bull's eye to be elongated upward and to the right or left according to the direction of the wind.

43. What are shot marks?

A. They are pieces of cardboard or tin, with springs attached to them for fastening them over the shot holes in targets. They are 3, 5, and 10 inches in diameter and are white one side and black on the other. They are used to mark on the bull's eye target the position of the last hit.

44. What are the natural requisites for one to become a good shot?

A. In order for a person to become a good shot he should be in good physical condition, particularly as to eye sight. One's nerves should be in excellent control and one should not be easily excited.

45. What training and development should one undergo to become a good shot?

A. First of all it is necessary for one to take considerable physical exercise regularly prior to the practice on the range. The development of the muscles used in firing is of prime importance. The ability to sight correctly must also be developed, and then should follow earnest practice in using the muscles used in firing in conjunction with the practice in aiming. In this way one develops the ability to hold the rifle properly aimed and to pull the trigger without deranging the true aim. When one has accomplished this considerable progress has been made toward becoming a good shot. The state of one's ability to "hold" well is indicated by the results obtained at gallery practice. During the preliminary work one should study the effects of wind, changes of light, humidity, temperature, mirage, etc., and learn the theory of the use of the sight adjustments both as to windage and elevation. Later on one must develop the ability to estimate wind velocity, and every rifleman should know how to take the very best care of his rifle in order that he may always obtain the best results from it.

46. Why should the cleaning rod be inserted at the breech end of the bore?

A. In order that no possible injury shall be done the lands near the muzzle.

47. Describe the removal of fouling from the rifle barrel.

A. Fouling is of two kinds, that caused by the powder and caused by particles of metal from the jacket of the bullet adhering to the bore.

First remove the bolt and from the breech end of the bore remove all powder fouling by means of a cleaning rod and patches of thin flannel or other soft cloth soaked in "Hoppe's Powder Solvent No. 9." The rags should be about 1¼ inches square. This clean-

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ing must be continued until all the powder fouling has been removed. The barrel should then be thoroughly wiped out with clean, dry patches. After the powder fouling has been removed use the following solution: Ammonia persulphate, 1 ounce; ammonium carbonate, 200 grams; 28 per cent. ammonia, 6 ounces, and water, 4 ounces. The two powders should be freed from lumps by mashing them separately. Dissolve the persulphate in the ammonia and the carbonate in the water and then both solutions should be placed together in a bottle and corked. In an hour this solution will be ready to use.

Stop the breech end of the bore with a suitable cork and fill the barrel with the solution. This should be left in the barrel not more than ten minutes. Immediately after removing the solution from the barrel pour water into the bore to stop the action of the solution on the metal. The barrel should then be dried and thoroughly wiped out and an oily rag passed through it.

48. Describe cleaning the rifle.

A. After firing, the bore of rifle should be thoroughly cleaned with the No. 9 powder solvent, wiped out again, and an oily rag passed through it. The outside of the rifle should be given a thin coating of cosmic or 3-in-1 Oil for the metal parts and linseed oil for the stock. The magazine and other working parts should be kept clean and oiled. Every rifle should be cleaned sufficiently often to prevent the formation of rust.

The sling should be kept soft and pliable by the moderate use of neatsfoot oil.

49. What is the time of flight for the maximum range? A. 38.058 seconds.

50. What is the maximum number of aimed shots that have been fired from the rifle in one minute? A. 25.

51. What is the weight of the bullet? The powder charge?

A. Bullet 150 grains. Powder 50 grains.

52. Describe dismounting the bolt.

A. Place the cut-off at the centre notch; cock the arm and turn the safety lock to a vertical position, raise the bolt handle and draw out the bolt.

Hold bolt in left hand, press sleeve lock in with thumb of right hand to unlock sleeve bolt, and unscrew sleeve by turning to the left.

Hold sleeve between forefinger and thumb of the left hand, draw cocking piece back with middle finger and thumb of right hand, turn safety lock down to the left with forefinger of the right hand, in order to allow the cocking piece to move forward in sleeve; thus partially relieving the tension of the main spring; with the cocking piece against breast, draw back the firing pin sleeve with the forefinger and thumb of right hand and hold it in this position while removing the striker with the left hand; pull firing pin out of sleeve; turn the extractor to the right, forcing its tongue out of the groove in the front of the bolt, and force the extractor forward and off the bolt.

53. Describe assembling the bolt.

A. Grasp with the left hand the rear of the bolt, handle up, and turn the extractor collar with the thumb and forefinger of the right hand until its lug is on a line with the safety lug of the bolt; take the extractor in the right hand and insert the lug on the collar in the under-cuts in the extractor by pushing the extractor to the rear until its tongue comes in contact with the rim on the face of the bolt (a slight pressure with the left thumb on the top of the rear part of the extractor assists in this operation); turn the extractor to the right until it is over the right lug; take the bolt in the right hand and press the hook of the extrac-

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tor against the butt plate or some rigid object, until the tongue on the extractor enters its groove in the bolt.

With the safety lock turned down to the left to permit the firing pin to enter the sleeve as far as possible, assemble the sleeve and firing pin; place the cocking piece against the breast and put on main spring, firing pin sleeve and striker. Hold the cocking piece between the thumb and forefinger of the left hand, and by pressing the striker point against some substance, not hard enough to injure it, force the cocking piece back until the safety lock can be turned to the vertical position with the right hand; insert the firing pin in the bolt and screw up the sleeve (by turning it to the right) until the sleeve lock enters its notch on the bolt.

See that the cut-off is at the centre notch; hold the piece under floor plate in the fingers of the left hand, the thumb extending over the left side of the receiver; take bolt in right hand with safety lock in a vertical position and safety lug up; press rear end of follower down with the left thumb and push bolt into the receiver; lower bolt handle; turn safety lock and cut-off down to the left with the right hand.

54. What considerations should govern in selecting the proper size of aperture for the peep sight?

A. The aperture should be the smallest through which the target and front sight can be seen clearly without straining the eye. Too large an aperture renders it difficult to find the centre of it accurately and quickly, while too small an aperture renders the front sight and target indistinct.

CORRECTIONS CORRESPONDING TO ONE POINT OF THE WIND GAUGE OR SCALE AND TO A CHANGE IN ELEVATION OF 25 YARDS

Range	Correction caused by moving the eyepiece one point	Correction Corresponding to a change in elevation of 25 yards
100	4.311	0.72405
200	8.622	1.6189
300	12.933	2.7701
400	17.244	4.328
500	21.555	6.182
600	25.866	8.542
700	30.177	11.674
800	34.488	15.620
900	38.799	19.769
1,000	43.110	24.813
1,100	47.421	30.874
1,200	51.732	37.097

TABLE SHOWING NUMBER OF POINTS OF DEFLECTION OR WINDAGE NECESSARY TO CORRECT FOR A 10-MILE-AN-HOUR WIND, DRIFT NOT CONSIDERED. (Computed)

Range yards	Direction of Wind: III, IX	II, IV VIII, X	I, V VII, XI
100	0.23	0.2	0.1
200	.34	.31	.17
300	.61	.53	.30
400	.86	.75	.43
500	1.11	.96	.55
600	1.39	1.2	.69
700	1.68	1.45	.84
800	2.00	1.73	1.00
900	2.34	2.03	1.17
1,000	2.67	2.30	1.33
1,100	3.01	2.61	1.50
1,200	3.32	2.88	1.66

DRIFT WITH TARGET RIFLES, MODEL OF 1905 SIGHTS GRADUATED FOR 1906 AMMUNITION

Range (yards)	Total drift		Drift corrected by sight leaf		Drift uncorrected (right)	Deviation of bullet produced by a 1-mile wind normal to the plane of fire
	(1) Left	(2) Right	(3) Left	(4) Right		(5)
	Inches	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*
100	0.26		0.26		0.0	0.1
200	0.42		0.42		0.0	0.3
300	0.45		0.45		0.0	0.8
400	0.32		0.32	0.0	0.0	1.5
500	0.0				0.0	2.4
600		0.55		0.55	0.0	3.6
700		2.0		1.4	0.6	5.1
800		4.5		2.6	1.9	6.
900		8.2		4.2	4.0	9.1
1,000		13.0		6.3	6.7	11.5
1,100		20.5		9.0	11.5	14.3
1,200		29.3		12.3	17.0	17.2

In rapid fire, using the battle sight, the correct point of aim, under the figure, at the various distances is as follows:

500 Yards 7 inches; 300 Yards 28 inches;
400 Yards 23 inches; 200 Yards 25 inches.
350 Yards 26 inches;

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NATIONAL SERVICE

June, 1917

EDITORIALS

THE MILITARY TRAINING CAMPS ASSOCIATION

ON APRIL the 17th a far reaching announcement was made by the War Department. It was ordered in effect that no further appointments of officers for the new armies would be made save on a basis of merit, as demonstrated in actual field training.

To assemble the material for officers, afford the training, and select the necessary number of not less than 10,000 officers for the first increment of 500,000 troops under the draft, sixteen training camps were to be opened on May the 15th in various sections of the country. All applicants were obliged to fill out papers, with letters of recommendation, and appear personally before a regular officer, besides undergoing a rigid physical examination. The plan provided for 2,500 picked men in each camp, making a total of 40,000, all of whom should be trained for three months, with regular army officers and commissions issued to those best standing the test. The plan as such was ideal, well conceived and formulated by able officers of the Staff Department. At one stroke it provided a method of destroying the system of political appointment of officers, which has been our curse in past wars, and ensured, if well executed a corps of officers of which the country will be proud.

The plan, however, was one thing and its execution another. How with our small number of devoted Regular Army Officers already overburdened, and the recruiting stations fully occupied in enlisting for the regular service should over 100,000 applicants for the Officers' Camps be examined and 40,000 carefully selected in a space of 20 days? In assisting the Army to the successful accomplishment of this task the Military Training Camps Association of the United States has performed a public service of the first order, which stands almost unique as an example of successful coöperation between the Government and civilian bodies.

The legislation making it possible to establish the camps was section 54 of the Defense Act, which was enacted at the instance of the Association in 1916 to give governmental recognition and support to the Federal Citizens

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Training Camps, held at Plattsburg and elsewhere. This legislation and an unexpended appropriation under it supplied the machinery for the Officers' Camps. To meet the new war conditions it required merely a change of the regulations framed by the War Department under section 54, by lengthening the course of training from one month to three and obligating the men to accept a commission, if tendered. It was an opportunity to make good the work initiated by General Wood, as far back as 1913, and developed on a national scale by the 18,000 members of previous camps united in the Training Camps Association. The Association boldly and successfully met the situation.

Within 48 hours from the first announcement tens of thousands of circulars were distributed by the Association, throughout the country describing the plan in detail and giving directions for enrollment. Recruiting stations were provided, stenographers and volunteer workers supplied and a great machine placed instantly at the disposal of the Army. In the Central Department alone committees in 856 different communities took part in the work and it is calculated that 1,200 men gave their time and effort to the Government for 14 days, all of course without compensation. One of the great problems was that of physical examinations. To meet this situation the Association in hundreds of cities and towns secured the services of volunteer physicians who examined, according to army standards, not less than 80,000 men within less than twenty days. In New York City alone 9,000 were thus examined between April 23rd and May 8th.

In the whole campaign the Association expended about $50,000 in cash and contributed services of the value of at least $500,000.

The total number of applicants in the whole country was about 150,000 of whom 75,000 in round numbers were certified by the Army Examiners as acceptable and 40,000 (the full quota) were assembled in the various training centres from Maine to California on the appointed date, exactly 28 days from the first announcement of the plan.

The result is a striking example of what it is possible to accomplish by loyal team work between the Army and a body of civilians whose motives are disinterested and whose willingness to sacrifice their personal interests to the common good has been beyond praise.

Numbered among those who gathered in the camps on May 15th were thousands of the members of the Training Camps Association "seeing it through." NATIONAL SERVICE sends them all its sincere congratulations and good wishes.

THE FUTURE OF UNIVERSAL SERVICE

WHEN the Administration submitted the Draft Act to Congress the President was careful to point out that the legislation was intended purely as an emergency measure and that the question of a permanent military policy was to be left open until after the war. What does this mean for Universal Training?

At first sight it would appear that we may be left at the close of the war without any effective military system. If this is to be so, the war, in the opinion of many, will be fought largely in vain. But this is on the surface merely. It must be remembered that all enlistments in the various divisions of the National Army including the Regular Army, the

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National Guard and the drafted forces will be for the period of the war only. The practical result will be that with the disbanding of the war armies, we shall be left with no military forces whatever. In that situation it will hardly be possible to avoid facing directly the whole problem of military organization. The question will squarely arise whether our new armies shall be built on the principle of the paid service of a few or on the universal training of our youth from year to year. The experiences of the war will sufficiently demonstrate the necessity for a large available supply of trained men, in order not to make aggressive war but merely to prevent war or, if forced into it, to bring another war to an early and decisive close. At least one million, possibly many millions of voters will have experienced that necessity and can be depended upon to see to it that the situation in which we now find ourselves shall not recur.

It is not inconceivable even that the lessons of the war will become so obvious to the mass of the population that the Chamberlain Bill, now quietly pigeon holed, will be pulled out during the war and enacted in response to an imperious demand of the whole people.

Far from preventing the passage of a universal training law, we have a conviction that the War of 1917 makes the adoption of that policy a moral certainty.

ECONOMIC READJUSTMENT OF LABOR

AT NO time has it been so important as now to attack the ancient fallacy that money in itself is of any great value. Money is a counter, not goods. It is of inestimable importance as a transmitter of values but in itself it has little. Iron is intrinsically more important to the world than gold. The unprecedented amount of money in this country at present, including gold equal to that held by all Europe, will not in itself help to win the war; but it can be of immense value if put intelligently to work to induce labor to go where labor is needed.

The labor power of this country can hardly be overestimated, its resources in most of the goods needed just now are more than ample; but great numbers of men and women are at present employed in ways which, however suited to conditions of luxurious peace times, are shockingly out of place when the supremacy of democratic institutions is threatened.

Workers are needed in vast numbers to build ships, both wooden and steel ships. They are needed on farms in increasing numbers. It is likely that many more will be needed for transportation. The munition factories must have many more hands at work. Instead of employment in making luxuries there must be employment in making necessities.

The waste of war is colossal. Even this country, accustomed to magnificence, must change its scale. It has begun well with a seven billion dollar war budget; but it must see to it that this is transformed into a huge actual production of necessary goods; and it can do this by paying the price for labor in the industries which minister to war.

It is not particularly desirable to work in munition factories, nor fascinating to do farm work except in idyllic novels. We cannot, for the present at least, draft men to do this work. Theoretically we can, practically we cannot in the present stage of the war. The only way to get men into such work is to pay them.

Let us stop talking about the power

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of money and begin to exert it by using it to shift labor from unproductive to productive industries on the vast scale necessary to provide the food, munitions and ships without which the war cannot be won.

EAST AND WEST

AN ACUTE critic once spoke of "a certain condescension in foreigners." Is there not danger that what is more or less the Middle West may have some just ground for complaint with reference to certain aspersions which have been current upon its interest in the war. Certainly the enlistments in the Middle West—which President Thwing of Western Reserve University insists should be called the "Middle East"—are not an indication either of lack of patriotism or of determination to see the war through.

A member of the NATIONAL SERVICE staff who was recently speaking in various Western cities for universal training, endeavored to run down the cause of the Eastern suspicion of Mid-Western objection to universal service as contrasted with the supposed more fervent convictions on this subject in the East. Certain points may be enumerated.

The cause cannot be distance from the seat of war, for all parts of the country get the same telegraphic dispatches; but they do not all print them to the same extent. Mid-Western papers, as a rule—there are notable exceptions—do not print articles which are common in Eastern papers bringing the facts of the European conflict vividly before the reader's mind. Apparently their reading public is not so much interested. As a result the implications of the European situation have not been so plain to West as to East.

Public opinion, in the judgment of a well known writer and critic of the Middle West, is more quickly formed in the East, especially New York, because in the East there is more initiative in proclaiming new policies. In the opinion of this writer the Eastern leaders do not wait so long to hear what others are thinking, they tell what they think themselves in no uncertain tones. In Western cities, he believed that men were more apt to follow the necessarily slower process of discussing situations with their neighbors before they formed their opinions.

The influence of foreign population upon the caution of fellow townsmen is felt much more keenly in smaller communities. There are more intermarriages perhaps in Cleveland, Cincinnati, Milwaukee, St. Louis, and Indianapolis which introduce the German influence than in Eastern cities with as large proportionate foreign elements. Where fellow directors of corporations, banks and clubs, fellow officers of Churches and social organizations are of different racial origin the intimacies of such association in the West lead not so much to timidity as to reluctance to wound or alienate.

Again, the German population of those regions is not so much actively hostile, or unpatriotic as sluggish. It fought for the Union in the Sixties and will fight for America to-day when once it realizes the "inevitable conflict."

But the apparent indifference to universal training and service, an indifference more of Congressmen than of populace, is believed to be largely due to the halo which tradition has thrown around the volunteers of the past. No section of the Union sent so large a number of troops in the Civil War as this same Middle West.

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The memory of them is justly dear to their descendants—and there are not a few of the actual participants still surviving in vigor. These confuse the glory of their own service with the principle of volunteering—a principle which has never worked in history and which was notably ineffective in the Civil War.

One of the most important services which could be rendered would be to demonstrate to the volunteers just where, in what concrete instances, that volunteer *plan* has failed, in this country and in England.

There is no section of the country more sturdily American to-day than the Middle West, none which can be depended upon more surely to sacrifice itself and its wealth for the principles of democracy when once it has realized that the issue is joined between those principles and the principles of autocracy.

But there are many in the Middle West who are grateful to the East for its part in stinging the country from its slumber. Perhaps both sections are still somewhat somnolent with regard to the magnitude and duration of this war.

OUR MILITARY POWER

WITH the passage of the Selective Draft Act and the President's proclamation in pursuance thereof it is appropriate to review broadly the state of our military resources.

What organized forces have we now available? First of all there is of course, the Regular Army. Its strength on April 12, according to the official statement of the Secretary of War, was 131,481. From April 1 to May 19, the number of recruits obtained was 76,087. Putting these together and allowing for normal losses and new recruits to June 1, we shall be close to the facts in estimating our Regular Army strength at around 200,000 on June 1. Many of these troops are required for overseas garrisons and the manning of our coast artillery. If we put at 125,000 the strength available for an expeditionary force the estimate is a close one. This is, of course, our best organized and most dependable military force, although its organization has been lately somewhat weakened by the sudden influx of a large proportion of new recruits and its availability for immediate service in battle will be further impaired by the necessity of absorbing additional raw material before war strength is reached. War strength is in round numbers 293,000 necessitating the further recruitment of nearly 100,000 new men after June 1.

Next comes the National Guard. There has been much loose talk about its strength and availability. Prior to the Mexican mobilization the National Guard paper strength had never risen above 125,000. At the high point in August, 1916, the numbers rose to about 155,000 but a rather startling revelation was made when Secretary of War announced, on April 12, that the number on that date was but 123,605. The war strength of the *existing units* of the Guard is 329,954 leaving a deficiency of 206,349.

The only other organized force for land service is the Marine Corps numbering roughly 20,000 on May 19. In addition there are the nine volunteer Engineer regiments in process of formation—about 9,000; the Regular Army reserve 8,000 and the Enlisted Reserve Corps, which includes the Aviation Section and various special branches, about 8,000. There should also be considered the 40,000 men now in training in the Officers' Training Schools.

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Summarizing the situation we may put the actual strength of our organized land forces on June 1 at 350,000 men, of whom about 250,000 could theoretically be made available within a reasonable time for a foreign expedition.

There must be taken into account, however, the necessity of training and developing our potential power. To set to one side all our organized and trained personnel would leave us helpless to put in training the great citizen army to be created under the Draft Act. For this purpose heavy withdrawals must necessarily be made from the organized forces.

The military plan of the Administration calls for the recruitment of the Regular Army, National Guard and Marine Corps by voluntary enlistment of men between 18 and 45—a total (allowing for losses in the process) of not less than 350,000 men. We are also to draft, train and officer as soon as possible a further 500,000 men and make provision to keep all these forces at full strength. This is the task that now confronts the War Department and the country.

The broad conclusion is that our military situation is such that we are not in a position to end the war in the near future by throwing into the scales any decisive military strength. No doubt this condition of affairs will cost us many billions of treasure and, it is to be feared, many thousands of American lives. Such is the cost of unpreparedness and of a consistent failure to face the facts in the last three years.

It is, however, no time for recrimination or discussion of the responsibility for this state of affairs. That time will come when, after the war, the people will be called upon to answer the question whether we shall adopt the permanent policy of training our youth for military service, which alone can render impossible a recurrence of the situation. Now it is for the country to face the music and, fully realizing the facts, to set about the great task of developing our potential power with all the vast energy that the nation possesses, if once aroused.

THE WESTERN FRONT

THIS is above all things a war of numbers. Great Britain started last in the race, and started badly. But the slow moving, self-satisfied, exasperating British Nation woke up at last, and now they are making good. Those, out in the front line, had to wait a long time for the realization of their hopes, and the justification of their faith in their own country. But it was something to have lived through that year, if only to be able to contrast its end with its beginning.

But they have paid a price. When a country suddenly finds itself at war, who comes to her aid? The flower of her youth. That is the curse of the voluntary system. The best are the first to go, for the simple reason that they *must* go, to gain time for the others. In other words, we sacrifice the willing horse, who is always the best horse. We shall emerge triumphant from this crusade of ours; but when we do, we shall do well to remember those who went down into silence for us at the outset. If we desire to honor their memory, we can only do so in our way; and that is to make certain, by national action, that in future the burden of national service shall be equally distributed. Never again must the fit be sacrificed to the god of war in order that the unfit may reap the fruits of victory. That way national extinction lies, however great and powerful the nation.

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THE QUESTION OF A SERVICE COAT

IT WAS General "Pap" Thomas who is quoted as saying that the fate of a battle may depend "on a buckle or a linch-pin," and a number of experienced officers of the regular service are now very much exercised over the question of going to war with the present form of very unpractical service coat or blouse.

It is claimed by the fighting men who have to wear the coat—and they are the ones who ought to know and be consulted, that like many of our peace institutions, it is in no sense a fighting garment, and will in fact, prove a handicap.

The coat looks well on parade, and is all right for the garrison, the street, or the recruiting office, because it fits snug, buttons nattily around the throat, and is usually worn at such times, over a boiled shirt.

But when our soldiers take the field and necessarily don the ever-essential olive drab shirt, they prefer to discard the blouse and do their fighting untrammeled by its close fitting contour. The fighting men are almost a unit in declaring that the present coat is disagreeably binding about the chest, chokes the wearer about the neck—especially over the field shirt; and is about as unpractical a garment for fighting garb as could have been devised. A college athlete would have a case of the horrors if he had to wear it in outdoor contests, and nowadays soldiers must be athletes to win out in war.

Officers of our General Staff are said to have been very favorably impressed with the practical utility of the service coat worn by the military members of the British mission to the United States—a loose fitting, roomy, comfortable coat, with wide rolling collar and big pockets. Such a coat as a hunter would select for an all day tramp on a December day, or for sitting in a duck-blind during a storm of snow and sleet.

It is said that the War Department, possibly considering the question as merely academic, has so far turned a deaf ear to the many suggestions from the combatant arms for a sensible, fighting coat after the British model—even though officers have offered to make the necessary alterations at their own expense. But the question will not down, and it is to be hoped that the common sense alterations required to make the coat practical for use in the trenches, on the march, for bayonet work and bomb throwing, will be authorized before the fighting men of our first expeditionary force land in Europe. It would be almost criminal to handicap the soldier with a coat which does not permit the best use of his muscular strength. Let the question be reconsidered at once.

THE GROUNDWORK OF NATIONAL SUCCESS

LET us serve the great cause to the best of our present abilities, in the most effective and enlightened manner.

Emotion, love of adventure and of public applause must give way to intelligence.

We must study the nation's needs and determine our individual responsibilities accordingly and regardless of the nature of the sacrifice involved—be it of ambition, fortune or of life.

Cowardice, greed and bravado are equally out of place. The need of the hour is discriminating self subordination, identifying the individual purpose with the national.

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TWO HISTORIC DOCUMENTS *of the* WAR

[*The passage of the Selective Draft Act and the President's proclamation in pursuance thereof mark an epoch in our history. Moreover they will touch directly the lives of all Americans. It will be necessary for all citizens to be familiar with their terms. We therefore print these documents in full for the benefit of our readers, who will doubtless have occasion to refer to them more than once in the coming months. In the July number we shall expect to publish a careful analysis of the Draft Law and its workings.*—THE EDITORS.]

I

THE SELECTIVE DRAFT ACT APPROVED MAY 18, 1917

THAT in view of the existing emergency, which demands the raising of troops in addition to those now available, the President be, and he is hereby, authorized—

First. Immediately to raise, organize, officer, and equip all or such number of increments of the Regular Army provided by the national defense act approved June third, nineteen hundred and sixteen, or such parts thereof as he may deem necessary; to raise all organizations of the Regular Army, including those added by such increments, to the maximum enlisted strength authorized by law. Vacancies in the Regular Army created or caused by the addition of increments as herein authorized which can not be filled by promotion may be filled by temporary appointment for the period of the emergency or until replaced by permanent appointments or by provisional appointments made under the provisions of section twenty-three of the national defense act, approved June third, nineteen hundred and sixteen, and hereafter provisional appointments under said section may be terminated whenever it is determined, in the manner prescribed by the President, that the officer has not the suitability and fitness requisite for permanent appointment.

Second. To draft into the military service of the United States, organize, and officer, in accordance with the provisions of section one hundred and eleven of said national defense act, so far as the provisions of said section may be applicable and not inconsistent with the terms of this act, any or all members of the National Guard and of the National Guard Reserves, and said members so drafted into the military service of the United States shall serve therein for the period of the existing emergency unless sooner discharged: Provided, That when so drafted the organizations or units of the National Guard shall, so far as practicable, retain the State designations of their respective organizations.

Third. To raise by draft as herein provided, organize and equip an additional force of five hundred thousand enlisted men, or such part or parts thereof as he may at any time deem necessary, and to provide the necessary officers, line and staff, for said force and for organizations of the other forces hereby authorized, or by com-

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bining organizations of said other forces, by ordering members of the Officers' Reserve Corps to temporary duty in accordance with the provisions of section thirty-eight of the national defense act approved June third, nineteen hundred and sixteen; by appointment from the Regular Army, the Officers' Reserve Corps, from those duly qualified and registered pursuant to section twenty-three of the act of Congress approved January twenty-first, nineteen hundred and three (Thirty-second Statutes at Large, page seven hundred and seventy-five), from the members of the National Guard drafted into the service of the United States, from those who have been graduated from educational institutions at which military instruction is compulsory, or from those who have had honorable service in the Regular Army, the National Guard, or in the Volunteer forces, or from the country at large; by assigning retired officers of the Regular Army to active duty with such force with their rank on the retired list and the full pay and allowances of their grade; or by the appointment of retired officers and enlisted men, active or retired, of the Regular Army as commissioned officers in such forces: Provided, That the organization of said force shall be the same as that of the corresponding organizations of the Regular Army: Provided further, That the President is authorized to increase or decrease the number of organizations prescribed for the typical brigades, divisions, or army corps of the Regular Army, and to prescribe such new and different organizations and personnel for army corps, divisions, brigades, regiments, battalions, squadrons, companies, troops, and batteries as the efficiency of the service may require: Provided further, That the number of organizations in a regiment shall not be increased nor shall the number of regiments be decreased: Provided further, That the President in his discretion may organize, officer, and equip for each Infantry and Cavalry brigade three machine-gun companies, and for each Infantry and Cavalry division four machine-gun companies, all in addition to the machine-gun companies comprised in organizations included in such brigades and divisions: Provided further, That the President in his discretion may organize for each division one armored motor car machine-gun company. The machine-gun companies organized under this section shall consist of such commissioned and enlisted personnel and be equipped in such manner as the President may prescribe: And provided further, That officers with rank not above that of colonel shall be appointed by the President alone, and officers above that grade by the President by and with the advice and consent of the Senate: Provided further, That the President may in his discretion, recommission in the Coast Guard persons who have heretofore held commissions in the Revenue-Cutter Service or the Coast Guard and have left the service honorably, after ascertaining that they are qualified for service physically, morally, and as to age and military fitness.

Fourth. The President is further authorized, in his discretion and at such time as he may determine, to raise and begin the training of an additional force of five hundred thousand men organized, officered, and equipped, as provided for the force first mentioned in the preceding paragraph of this section.

Fifth. To raise by draft, organize, equip, and officer, as provided in the third paragraph of this section, in addition to and for each of the above forces, such recruit training units as

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he may deem necessary for the maintenance of such forces at the maximum strength.

Sixth. To raise, organize, officer, and maintain during the emergency such number of ammunition batteries and battalions, depot batteries and battalions, and such artillery parks, with such numbers and grades of personnel as he may deem necessary. Such organizations shall be officered in the manner provided in the third paragraph of this section, and enlisted men may be assigned to said organizations from any of the forces herein provided for or raised by selective draft as by this act provided.

Seventh. The President is further authorized to raise and maintain by voluntary enlistment, to organize, and equip, not to exceed four Infantry divisions, the officers of which shall be selected in the manner provided by paragraph three of section one of this act: Provided, That the organization of said force shall be the same as that of the corresponding organization of the Regular Army: And provided further, That there shall be no enlistments in said force of men under twenty-five years of age at time of enlisting: And provided further, That no such volunteer force shall be accepted in any unit smaller than a division.

Sec. 2. That the enlisted men required to raise and maintain the organizations of the Regular Army and to complete and maintain the organizations embodying the members of the National Guard drafted into the service of the United States, at the maximum legal strength as by this act provided, shall be raised by voluntary enlistment, or if and whenever the President decides that they can not effectually be so raised or maintained, then by selective draft; and all other forces hereby authorized, except as provided in the seventh paragraph of section one, shall be raised and maintained by selective draft exclusively; but this provision shall not prevent the transfer to any force of training cadres from other forces. Such draft as herein provided shall be based upon liability to military service of all male citizens, or male persons not alien enemies who have declared their intention to become citizens, between the ages of twenty-one and thirty years, both inclusive, and shall take place and be maintained under such regulations as the President may prescribe not inconsistent with the terms of this act. Quotas for the several States, Territories, and the District of Columbia, or subdivisions thereof, shall be determined in proportion to the population thereof, and credit shall be given to any State, Territory, District, or subdivision thereof, for the number of men who were in the military service of the United States as members of the National Guard on April first, nineteen hundred and seventeen, or who have since said date entered the military service of the United States from any such State, Territory, District, or subdivision, either as members of the Regular Army or the National Guard. All persons drafted into the service of the United States and all officers accepting commissions in the forces herein provided for shall, from the date of said draft or acceptance, be subject to the laws and regulations governing the Regular Army, except as to promotions, so far as such laws and regulations are applicable to persons whose permanent retention in the military service on the active or retired list is not contemplated by existing law, and those drafted shall be required to serve for the period of the existing emergency unless sooner discharged: Provided, That the Presi-

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dent is authorized to raise and maintain by voluntary enlistment or draft, as herein provided, special and technical troops as he may deem necessary, and to embody them into organizations and to officer them as provided in the third paragraph of section one and section nine of this act. Organizations of the forces herein provided for, except the Regular Army and the divisions authorized in the seventh paragraph of section one, shall, as far as the interests of the service permit, be composed of men who come, and of officers who are appointed from, the same State or locality.

Sec. 3. No bounty shall be paid to induce any person to enlist in the military service of the United States; and no person liable to military service shall hereafter be permitted or allowed to furnish a substitute for such service; nor shall any substitute be received, enlisted, or enrolled in the military service of the United States; and no such person shall be permitted to escape such service or to be discharged therefrom prior to the expiration of his term of service by the payment of money or any other valuable thing whatsoever as consideration for his release from military service or liability thereto.

Sec. 4. That the Vice President of the United States, the officers, legislative, executive, and judicial, of the United States, and of the several States, Territories, and the District of Columbia, regular or duly ordained ministers of religion, students who at the time of the approval of this act are preparing for the ministry in recognized theological or divinity schools and all persons in the military and naval service of the United States shall be exempt from the selective draft herein prescribed; and nothing in this act contained shall be construed to require or compel any person to serve in any of the forces herein provided for who is found to be a member of any well-recognized religious sect or organization at present organized and existing and whose existing creed or principles forbid its members to participate in war in any form and whose religious convictions are against war or participation therein in accordance with the creed or principles of said religious organizations, but no person so exempted shall be exempted from service in any capacity that the President shall declare to be noncombatant; and the President is hereby authorized to exclude or discharge from said selective draft and from the draft under the second paragraph of section one hereof, or to draft for partial military service only from those liable to draft as in this act provided, persons of the following classes: County and municipal officials; customhouse clerks; persons employed by the United States in the transmission of the mails; artificers and workmen employed in the armories, arsenals, and navy yards of the United States, and such other persons employed in the service of the United States as the President may designate; pilots; mariners actually employed in the sea service of any citizen or merchant within the United States; persons engaged in industries, including agriculture, found to be necessary to the maintenance of the Military Establishment or the effective operation of the military forces or the maintenance of national interest during the emergency; those in a status with respect to persons dependent upon them for support which renders their exclusion or discharge advisable; and those found to be physically or morally deficient. No exemption or exclusion shall continue when a cause therefor no longer exists: Provided, That notwithstanding the exemptions

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enumerated herein, each State, Territory, and the District of Columbia shall be required to supply its quota in the proportion that its population bears to the total population of the United States.

The President is hereby authorized, in his discretion, to create and establish throughout the several States and subdivisions thereof and in the territories and the District of Columbia local boards, and where, in his discretion, practicable and desirable, there shall be created and established one such local board in each county or similar subdivision in each State, and one for approximately each thirty thousand of population in each city of thirty thousand population or over, according to the last census taken or estimates furnished by the Bureau of Census of the Department of Commerce. Such boards shall be appointed by the President, and shall consist of three or more members, none of whom shall be connected with the Military Establishment, to be chosen from among the local authorities of such subdivisions or from other citizens residing in the subdivision or area in which the respective boards will have jurisdiction under the rules and regulations prescribed by the President. Such boards shall have power within their respective jurisdictions to hear and determine, subject to review as hereinafter provided, all questions of exemption under this act, and all questions of or claims for including or discharging individuals or classes of individuals from the selective draft, which shall be made under rules and regulations prescribed by the President, except, any and every question or claim for including or excluding or discharging persons or classes of persons from the selective draft under the provisions of this act authorizing the President to exclude or discharge from the selective draft "Persons engaged in industries, including agriculture, found to be necessary to the maintenance of the Military Establishment, or the effective operation of the military forces, or the maintenance of national interest during the emergency."

The President is hereby authorized to establish additional boards, one in each Federal judicial district of the United States, consisting of such number of citizens, not connected with the military establishment, as the President may determine, who shall be appointed by the President. The President is hereby authorized, in his discretion, to establish more than one such board in any Federal judicial district of the United States, or to establish one such board having jurisdiction of an area extending into more than one Federal judicial district.

Such district boards shall review on appeal and affirm, modify, or reverse any decision of any local board having jurisdiction in the area in which any such district board has jurisdiction under the rules and regulations prescribed by the President. Such district boards shall have exclusive original jurisdiction within their respective areas to hear and determine all questions or claims for including or excluding or discharging persons or classes of persons from the selective draft, under the provisions of this act, not included within the original jurisdiction of such local boards.

The decisions of such district boards shall be final except that, in accordance with such rules and regulations as the President may prescribe, he may affirm, modify or reverse any such decision.

Any vacancy in any such local board or district board shall be filled by the President, and any member of any such local board or district board

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may be removed and another appointed in his place by the President, whenever he considers that the interest of the Nation demands it.

The President shall make rules and regulations governing the organization and procedure of such local boards and district boards, and providing for and governing appeals from such local boards to such district boards, and reviews of the decisions of any local board by the district board having jurisdiction, and determining and prescribing the several areas in which the respective local boards and district boards shall have jurisdiction, and all other rules and regulations necessary to carry out the terms and provisions of this section, and shall provide for the issuance of certificates of exemption, or partial or limited exemptions, and for a system to exclude and discharge individuals from selective draft.

Sec. 5. That all male persons between the ages of twenty-one and thirty, both inclusive, shall be subject to registration in accordance with regulations to be prescribed by the President; and upon proclamation by the President or other public notice given by him or by his direction stating the time and place of such registration it shall be the duty of all persons of the designated ages, except officers and enlisted men of the Regular Army, the Navy, and the National Guard and Naval Militia while in the service of the United States, to present themselves for and submit to registration under the provisions of this act; and every such person shall be deemed to have notice of the requirements of this act upon the publication of said proclamation or other notice as aforesaid given by the President or by his direction; and any person who shall willfully fail or refuse to present himself for registration or to submit thereto as herein provided, shall be guilty of a misdemeanor and shall, upon conviction in the district court of the United States having jurisdiction thereof, be punished by imprisonment for not more than one year, and shall thereupon be duly registered: Provided, That in the call of the docket precedence shall be given, in courts trying the same, to the trial of criminal proceedings under this act: Provided further, That persons shall be subject to registration as herein provided who shall have attained their twenty-first birthday and who shall not have attained their thirty-first birthday on or before the day set for the registration, and all persons so registered shall be and remain subject to draft into the forces hereby authorized, unless exempted or excused therefrom as in this act provided: Provided further, That in the case of temporary absence from actual place of legal residence of any person liable to registration as provided herein such registration may be made by mail under regulations to be prescribed by the President.

Sec. 6. That the President is hereby authorized to utilize the service of any or all departments and any or all officers or agents of the United States and of the several States, Territories, and the District of Columbia, and subdivisions thereof, in the execution of this act, and all officers and agents of the United States and of the several States, Territories, and subdivisions thereof, and of the District of Columbia, and all persons designated or appointed under regulations prescribed by the President whether such appointments are made by the President himself or by the governor or other officer of any State or Territory to perform any duty in the execution of this act, are hereby required to perform such duty as the President shall

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order or direct, and all such officers and agents and persons so designated or appointed shall hereby have full authority for all acts done by them in the execution of this act by the direction of the President. Correspondence in the execution of this act may be carried in penalty envelopes bearing the frank of the War Department. Any person charged as herein provided with the duty of carrying into effect any of the provisions of this act or the regulations made or directions given thereunder who shall fail or neglect to perform such duty; and any person charged with such duty or having and exercising any authority under said act, regulations, or directions, who shall knowingly make or be a party to the making of any false or incorrect registration, physical examination, exemption, enlistment, enrollment, or muster; and any person who shall make or be a party to the making of any false statement or certificate as to the fitness or liability of himself or any other person for service under the provisions of this act, or regulations made by the President thereunder, or otherwise evades or aids another to evade the requirements of this act or of said regulations, or who, in any manner, shall fail or neglect fully to perform any duty required of him in the execution of this act, shall, if not subject to military law, be guilty of a misdemeanor, and upon conviction in the district court of the United States having jurisdiction thereof, be punished by imprisonment for not more than one year, or, if subject to military law, shall be tried by court-martial and suffer such punishment as a court-martial may direct.

Sec. 7. That the qualifications and conditions for voluntary enlistment as herein provided shall be the same as those prescribed by existing law for enlistments in the Regular Army, except that recruits must be between the ages of eighteen and forty years, both inclusive, at the time of their enlistment; and such enlistments shall be for the period of the emergency unless sooner discharged. All enlistments, including those in the Regular Army Reserve, which are in force on the date of the approval of this act and which would terminate during the emergency shall continue in force during the emergency unless sooner discharged; but nothing herein contained shall be construed to shorten the period of any existing enlistment: Provided, That all persons enlisted or drafted under any of the provisions of this act shall as far as practicable be grouped into units by States and the political subdivisions of the same: Provided further, That all persons who have enlisted since April first, nineteen hundred and seventeen, either in the Regular Army or in the National Guard, and all persons who have enlisted in the National Guard since June third, nineteen hundred and sixteen, upon their application shall be discharged upon the termination of the existing emergency.

The President may provide for the discharge of any or all enlisted men whose status with respect to dependents renders such discharge advisable; and he may also authorize the employment on any active duty of retired enlisted men of the Regular Army, either with their rank on the retired list or in higher enlisted grades, and such retired enlisted men shall receive the full pay and allowances of the grades in which they are actively employed.

Sec. 8. That the President, by and with the advice and consent of the Senate, is authorized to appoint for the period of the existing emergency such general officers of appropriate

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grades as may be necessary for duty with brigades, divisions, and higher units in which the forces provided for herein may be organized by the President, and general officers of appropriate grade for the several Coast Artillery districts. In so far as such appointments may be made from any of the forces herein provided for, the appointees may be selected irrespective of the grades held by them in such forces. Vacancies in all grades in the Regular Army resulting from the appointment of officers thereof to higher grades in the forces other than the Regular Army herein provided for shall be filled by temporary promotions and appointments in the manner prescribed for filling temporary vacancies by section one hundred and fourteen of the national defense Act approved June third, nineteen hundred and sixteen; and officers appointed under the provisions of this act to higher grades in the forces other than the Regular Army herein provided for shall not vacate their permanent commissions nor be prejudiced in their relative or lineal standing in the Regular Army.

Sec. 9. That the appointments authorized and made as provided by the second, third, fourth, fifth, sixth, and seventh paragraphs of section one and by section eight of this Act, and the temporary appointments in the Regular Army authorized by the first paragraph of section one of this Act, shall be for the period of the emergency, unless sooner terminated by discharge or otherwise. The President is hereby authorized to discharge any officer from the office held by him under such appointment for any cause which, in the judgment of the President, would promote the public service; and the general commanding any division and higher tactical organization or territorial department is authorized to appoint from time to time military boards of not less than three nor more than five officers of the forces herein provided for to examine into and report upon the capacity, qualification, conduct, and efficiency of any commissioned officer, within his command other than officers of the Regular Army holding permanent or provisional commissions therein. Each member of such board shall be superior in rank to the officer whose qualifications are to be inquired into, and if the report of such board be adverse to the continuance of any such officer and be approved by the President, such officer shall be discharged from the service at the discretion of the President with one month's pay and allowances.

Sec. 10. That all officers and enlisted men of the forces herein provided for other than the Regular Army shall be in all respects on the same footing as to pay, allowances, and pensions as officers and enlisted men of corresponding grades and length of service in the Regular Army; and commencing June one, nineteen hundred and seventeen, and continuing until the termination of the emergency, all enlisted men of the Army of the United States in active service whose base pay does not exceed $21 per month shall receive an increase of $10 per month; those whose base pay is $24, an increase of $8 per month; those whose base pay is $30, $36, or $40, an increase of $6 per month; and those whose base pay is $45 or more, an increase of $5 per month: Provided, That the increases of pay herein authorized shall not enter into the computation of continuous-service pay.

Sec. 11. That all existing restrictions upon the detail, detachment, and employment of officers and enlisted men of the Regular Army are

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hereby suspended for the period of the present emergency.

Sec. 12. That the President of the United States, as Commander in Chief of the Army, is authorized to make such regulations governing the prohibition of alcoholic liquors in or near military camps and to the officers and enlisted men of the Army as he may from time to time deem necessary or advisable: Provided, That no person, corporation, partnership, or association shall sell, supply, or have in his or its possession any intoxicating or spirituous liquors at any military station, cantonment, camp, fort, post, officers' or enlisted men's club, which is being used at the time for military purposes under this act, but the Secretary of War may make regulations permitting the sale and use of intoxicating liquors for medicinal purposes. It shall be unlawful to sell any intoxicating liquor, including beer, ale, or wine, to any officer or member of the military forces while in uniform, except as herein provided. Any person, corporation, partnership, or association violating the provisions of this section or the regulations made thereunder shall, unless otherwise punishable under the Articles of War, be deemed guilty of a misdemeanor and be punished by a fine of not more than $1,000 or imprisonment for not more than twelve months, or both.

Sec. 13. That, the Secretary of War is hereby authorized, empowered, and directed during the present war to do everything by him deemed necessary to suppress and prevent the keeping or setting up of houses of ill fame, brothels, or bawdy houses within such distance as he may deem needful of any military camp, station, fort, post, cantonment, training, or mobilization place, and any person, corporation, partnership, or association receiving or permitting to be received for immoral purposes any person into any place, structure, or building used for the purpose of lewdness, assignation, or prostitution within such distance of said places as may be designated, or shall permit any such person to remain for immoral purposes in any such place, structure, or building as aforesaid, or who shall violate any order, rule, or regulation issued to carry out the object and purpose of this section shall, unless otherwise punishable under the Articles of War, be deemed guilty of a misdemeanor and be punished by a fine of not more than $1,000, or imprisonment for not more than twelve months, or both.

Sec. 14. That all laws and parts of laws in conflict with the provisions of this Act are hereby suspended during the period of this emergency.

II

THE PRESIDENT'S PROCLAMATION UNDER THE DRAFT ACT

Executive Mansion, Washington, D. C., May 18, 1917.

WHEREAS, Congress has enacted and the President has on the 18th day of May, one thousand nine hundred and seventeen, approved a law, which contains the following provisions:

SECTION 5.—That all male persons between the ages of 21 and 30, both inclusive, shall be subject to registration in accordance with regulations to be prescribed by the President: And upon proclamation by the President or other public notice given by him or by his direction stating the time and place of such registration it shall be the duty of all persons of the designated ages, except officers and enlisted men of the regular army, the navy, and the National Guard and Naval Militia while in the service of the United States, to present themselves for and submit to registration under the provisions of this act: And every such

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person shall be deemed to have notice of the requirements of this act upon the publication of said proclamation or other notice as aforesaid, given by the President or by his direction: And any person who shall wilfully fail or refuse to present himself for registration or to submit thereto as herein provided, shall be guilty of a misdemeanor and shall, upon conviction in the District Court of the United States having jurisdiction thereof, be punished by imprisonment for not more than one year, and shall thereupon be duly registered; provided that in the call of the docket precedence shall be given, in courts trying the same, to the trial of criminal proceedings under this act; provided, further, that persons shall be subject to registration as herein provided, who shall have attained their twenty-first birthday and who shall not have attained their thirty-first birthday on or before the day set for the registration; and all persons so registered shall be and remain subject to draft into the forces hereby authorized unless excepted or excused therefrom as in this act provided; provided further, that in the case of temporary absence from actual place of legal residence of any person liable to registration as provided herein, such registration may be made by mail under regulations to be prescribed by the President.

SECTION 6.—That the President is hereby authorized to utilize the service of any or all departments and any or all officers or agents of the United States and of the several States, territories, and the District of Columbia and subdivisions thereof in the execution of this act, and all officers and agents of the United States and of the several States, territories, and subdivisions thereof, and of the District of Columbia; and all persons designated or appointed under regulations prescribed by the President, whether such appointments are made by the President himself or by the Governor or other officer of any State or territory to perform any duty in the execution of this act, are hereby required to perform such duty as the President shall order or direct, and all such officers and agents and persons so designated or appointed shall hereby have full authority for all acts done by them in the execution of this act by the direction of the President. Correspondence in the execution of this act may be carried in penalty envelopes, bearing the frank of the War Department. Any person charged, as herein provided, with the duty of carrying into effect any of the provisions of this act or the regulations made or directions given thereunder who shall fail or neglect to perform such duty, and any person charged with such duty or having and exercising any authority under said act, regulations, or directions, who shall knowingly make or be a party to the making of any false or incorrect registration, physical examination, exemption, enlistment, enrollment, or muster, and any person who shall make or be a party to the making of any false statement or certificate as to the fitness or liability of himself or any other person for service under the provisions of this act, or regulations made by the President thereunder, or otherwise evades or aids another to evade the requirements of this act or of said regulations, or who, in any manner, shall fail or neglect fully to perform any duty required of him in the execution of this act, shall, if not subject to military law, be guilty of a misdemeanor, and upon conviction in the District Court of the United States, having jurisdiction thereof, be punished by imprisonment for not more than one year, or, if subject to military law, shall be tried by court-martial and suffer such punishment as a court-martial may direct.

Now, therefore, I, Woodrow Wilson, President of the United States, do call upon the Governor of each of the several States and Territories, the Board of Commissioners of the District of Columbia, and all officers and agents of the several States and Territories, of the District of Columbia, and of the counties and municipalities therein, to perform certain duties in the execution of the foregoing law, which duties will be communicated to them directly in regulations of even date herewith.

And I do further proclaim and give notice to all persons subject to registration in the several States and in the

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District of Columbia in accordance with the above law, that the time and place of such registration shall be between 7 A. M. and 7 P. M. on the fifth day of June, 1917, at the registration place in the precinct wherein they have their permanent homes. Those who shall have attained their twenty-first birthday and who shall not have attained their thirty-first birthday on or before the day here named are required to register, excepting only officers and enlisted men of the regular army, the navy, the Marine Corps, and the National Guard and Naval Militia, while in the service of the United States, and officers in the Officers' Reserve Corps and enlisted men in the Enlisted Reserve Corps while in active service. In the territories of Alaska, Hawaii, and Porto Rico a day for registration will be named in a later proclamation.

And I do charge those who through sickness shall be unable to present themselves for registration that they apply on or before the day of registration to the County Clerk of the County where they may be for instructions as to how they may be registered by agent. Those who expect to be absent on the day named from the counties in which they have their permanent homes may register by mail, but their mailed registration cards must reach the places in which they have their permanent homes by the day named herein. They should apply as soon as practicable to the County Clerk of the county wherein they may be for instructions as to how they may accomplish their registration by mail. In case such persons as, through sickness or absence, may be unable to present themselves personally for registration shall be sojourning in cities of over 30,000 population, they shall apply to the City Clerk of the city wherein they may be sojourning rather than to the Clerk of the County. The Clerks of counties and of cities of over 30,000 population in which numerous applications from the sick and from non-residents are expected are authorized to establish such agencies and to employ and deputize such clerical force as may be necessary to accommodate these applications.

The power against which we are arrayed has sought to impose its will upon the world by force. To this end it has increased armament until it has changed the face of war. In the sense in which we have been wont to think of armies, there are no armies in this struggle, there are entire nations armed. Thus, the men who remain to till the soil and man the factories are no less a part of the army that is France than the men beneath the battle flags. It must be so with us. It is not an army that we must shape and train for war; it is a nation.

To this end our people must draw close in one compact front against a common foe. But this cannot be if each man pursues a private purpose. All must pursue one purpose. The nation needs all men; but it needs each man, not in the field that will most pleasure him, but in the endeavor that will best serve the common good. Thus, though a sharpshooter pleases to operate a trip-hammer for the forging of great guns and an expert machinist desires to march with the flag, the nation is being served only when the sharpshooter marches and the machinist remains at his levers.

The whole nation must be a team, in which each man shall play the part for which he is best fitted. To this end, Congress has provided that the nation shall be organized for war by selection; that each man shall be classified for service in the place to which it shall best serve the general good to call him.

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The significance of this cannot be overstated. It is a new thing in our history and a landmark in our progress. It is a new manner of accepting and vitalizing our duty to give ourselves with thoughtful devotion to the common purpose of us all. It is in no sense a conscription of the unwilling; it is, rather, selection from a nation which has volunteered in mass. It is no more a choosing of those who shall march with the colors than it is a selection of those who shall serve an equally necessary and devoted purpose in the industries that lie behind the battle line.

The day here named is the time upon which all shall present themselves for assignment to their tasks. It is for that reason destined to be remembered as one of the most conspicuous moments in our history. It is nothing less than the day upon which the manhood of the country shall step forward in one solid rank in defense of the ideals to which this nation is consecrated. It is important to those ideals no less than to the pride of this generation in manifesting its devotion to them, that there be no gaps in the ranks.

It is essential that the day be approached in thoughtful apprehension of its significance, and that we accord to it the honor and the meaning that it deserves. Our industrial need prescribes that it be not made a technical holiday, but the stern sacrifice that is before us urges that it be carried in all our hearts as a great day of patriotic devotion and obligation, when the duty shall lie upon every man, whether he is himself to be registered or not, to see to it that the name of every male person of the designated ages is written on these lists of honor.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed. Done at the City of Washington this 18th day of May in the year of our Lord one thousand nine hundred and seventeen, and of the independence of the United States of America the one hundred and forty-first.

WOODROW WILSON.

By the President:
ROBERT LANSING, Secretary of State.

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The GREAT WAR

A REVIEW OF THE MILITARY OPERATIONS FROM APRIL 10 TO MAY 10, 1917

By CAPT. STUART C. GODFREY
(*Corps of Engineers, U. S. Army*)

THE big developments of the month, in the way of actual fighting, have been in France. Here the unprecedented German retreat of March had created a novel situation. Over the eighty-mile front between Arras and Soissons, the Germans had placed between their new lines and the old Allied front a desolated strip from ten to twenty-five miles wide. Thus had they purchased immunity from any well organized attack over this area; thus they hoped to delay the Allied offensive for weeks or months, while they were enabled to await the result of their U-boat campaign, or perhaps to initiate an offensive themselves, as they had done a year before at Verdun.

THE ANSWER TO THE GERMAN RETREAT

The German strategy had been sound, but it was met by an equally good brand. The British and French attacks, which may be regarded as coordinated parts of the same offensive, were directed at the best possible objectives. The Germans had drawn in all along their centre, but stood firm on the flanks at Arras and Soissons. The new thrusts were directed against these supports, whose crumbling might mean the collapse of the whole line, just as a wave undermines the foundations of the building it would destroy. The remarkable thing was that the Allies were ready to attack so soon. Either they had been able to adapt themselves with wonderful rapidity to the changed conditions, or, as seems more probable, they had planned as early as February to attack at these very points. In any event, the outcome speaks well for the skill and foresight of the Allies' leaders.

THE OUTCOME

The threatened pivotal points did not crumble, but they were severely shaken. Particularly at the northern end where the Germans seem to have relied on the strong natural position of the Vimy Ridge and its environs, and to have held the line quite thinly, the British gains of the first few days were impressive. Advances were now measured in miles, where they had previously been reported in yards; and at Monchy, where the wedge had been driven deepest, five miles were won in five days, which would have taken five months at the Somme rate of progress. The toll of prisoners for the month, 20,000, compares well with former achievements; and the capture of 250 guns, many of large caliber, is noteworthy indeed. The French success was comparable to that of their allies. True, they were able to gain less ground toward their objective—Laon—and took only half as many guns; on the other hand, they counted more prisoners—about 30,000. Their offensive was on a much wider front, making it more difficult to secure such a striking immediate success; but their

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attack is so directed that its ultimate success promises to force a more extensive withdrawal on the part of the Germans. Moreover, it is a week younger than the British offensive, and has met with no such check as the latter suffered at Fresnoy; the Germans are now less heavily concentrated in its front than at Arras.

THE U-BOAT MENACE

In a war of such dimensions, the influence of other factors than the field armies is becoming increasingly apparent. Thus the field of operations extends not only from Arras to Bagdad, but includes the ocean zones where the U-boats are seeking their merchant prey, the military camps and the shipyards of America, where an unprecedented conscript army and an unparalleled fleet of wooden ships are being projected, and the troubled heart of Russia, where the loyalty of the new Democracy to the Allies is being sorely tried. During the last month, the submarine menace has assumed really alarming proportions. According to the statement given out by Secretary Lane, the loss of shipping during the last week in April amounted to about 400,000 tons. At such a rate, the combined ship-building facilities of all the Allies could not hope to offset this destruction. There has been some improvement since, but accurate figures are not available, since only the number of vessels lost is now reported. In solving this pressing problem, America's aid promises to be most timely, not only in supplying food and shipping to the Allies, but in suggesting, through the genius of her inventors, new and effective ways of fighting the under-sea peril.

GETTING READY

The alignment of the United States on their side tremendously heartened the Entente Allies. The new enlistment was first of all a moral endorsement of the issues for which they were fighting. But the entrance of this wealthy new belligerent promised in addition very real material advantages. The first token of these was manifested on April 14, when the House of Representatives passed without a dissenting vote the largest single loan on record, $7,000,000,000, nearly half of which it was planned to place at the disposal of the Allies.

In order to present their point of view, and to secure coöperation with the new ally, England and France sent to America some of their foremost statesmen and soldiers. These commissioners, among whom were Mr. Balfour, Marshal Joffre, and M. Viviani, were enthusiastically welcomed in this country. Their presence, and their representations of conditions in Europe, had no little effect in intensifying the work of preparation that was going on in Washington. On April 28, a test vote taken in the House showed that body to be overwhelmingly in favor of conscription as the only adequate method of raising an army; and the administration's programme, as embodied in the army bill, was finally authorized.

However gratifying the Russian revolution may be to the friends of democracy, the military situation in Russia is not a cheerful one for the Allies to contemplate. While much remains of mystery and conjecture, it is clear that the strength of the Russian forces has been at least temporarily weakened by the overthrow of the old régime. An offensive against Russia of the thorough-going German kind would probably have disastrous consequences for the Russians. The best reason why no such campaign has been initiated appears to lie in Germany's hope of separate

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peace with Russia—a development which would open up extensive food markets for the Central Powers, release over a million of their troops from the eastern frontier, and in general play havoc with the Allies' plans.

II. The Battle of Arras

THE INITIAL ACHIEVEMENT

The opening of this campaign, described in the review for last month, may be briefly summarized here. After an air-reconnaissance by a huge fleet of air-planes which dominated the air and photographed areas far back of the enemy's lines, and a bombardment which emphasized the superior gun-power of the British, the assaulting lines advanced on April 9 over the eleven-mile front from Givenchy to Henin. On the north, the Canadians swept through the successive lines of trenches on Vimy Ridge, and carried that formidable position, which overlooks Lens and dominates that entire sector (Hill 140, a commanding summit 500 feet high at the northern end of the ridge, did not fall till some days later). Farther south, opposite Arras, where no such obstacle exists, the British pushed east along both banks of the Scarpe, and drove a wedge deep into the German lines. In this attack, they were accompanied by a new and improved type of tank, which finds a useful field of service against rifle and machine gun fire. By the third day, they had won the village of Monchy; which formed the point of the wedge, here some five miles deep but thinning out opposite Vimy to a depth of a bare mile.

FURTHER BRITISH GAINS

The second phase of the battle saw the Germans, recovering from their first surprise, fighting to break down the sides of the wedge and narrow its point; but it found the English broadening the point of attack and following up their gains. In this the latter were generally successful, gradually bringing up their line abreast the Monchy position. Meanwhile, a part of General Horne's forces, holding the line north toward La Bassée, had become active in an enveloping movement about Lens (The Arras army is under General Allenby). On the 14th they entered Lievin, only two miles southwest of the "Coal City." Farther south, the Canadians had pushed down the steep eastern slope of Vimy Ridge through the town of Vimy and a mile beyond. On April 23, the fighting assumed a fresh intensity on the seven-mile front from Croisilles to Gavrelle. By that time the Germans had massed their reserves on this front, 10,000 to the mile. Such a concentration made progress extremely difficult, yet the British took Gavrelle and Guernappe on that day, with 2,000 prisoners. Desperate German counter-attacks followed; and the fighting of these days was particularly sanguinary. Another forward surge of the British on April 28 won them Arleux, and a temporary hold on Oppy, which they were compelled to relinquish. This latter advance was less vigorously followed up; progress over this area, made more difficult by the thousands of shell holes, is becoming much slower as the German defense stiffens.

THE ADVANCE CHECKED

The British have made further small gains but they have been difficult and costly. On May 8 a reverse was admitted at Fresnoy, southeast of Lens. This village, taken by the British on May 3, was recaptured by an attack of Bavarian and Frankish troops. The defeat is merely a local one, but indicates the stubbornness with which

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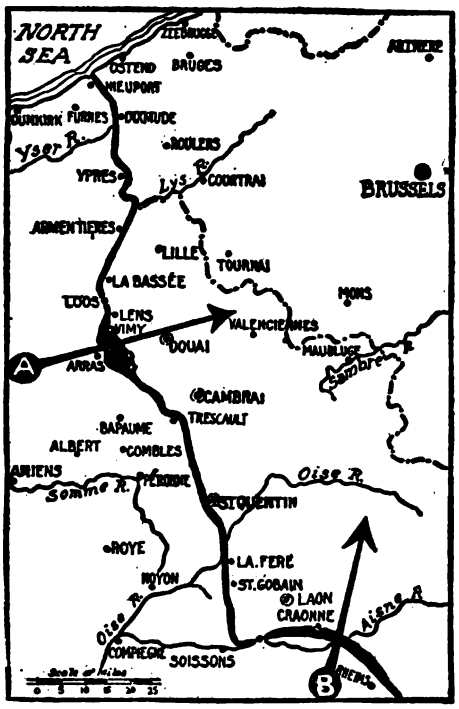
the Germans are disputing every foot of ground. As the month closed, the fighting was especially severe around Bullecourt, where the line bends east of Croisilles.

The English at Oppy and Monchy are fairly astride the "Oppy line" that marked one German defensive front. But this line is generally recognized to



I. THE BRITISH AND FRENCH ATTACKS

The arrow A shows the British drive at Arras, toward Douai. The arrow B represents the French attack extending from Soissons to Rheims. Between these two battlefields is the new line to which the Germans retired in March

be merely a switch-line leading back to the so-called "Wotan line," which breaks off sharply from Lens to Drocourt, thence south to Queant. The latter line is still two to three miles distant; and it cannot be said that its possession by the British, which is conceivably feasible, would lead to any decisive results or general retirement, not even the capture of Douai. It is the Grant method, of wearing out opponents, that the British must be content to follow; and they are following it in a most thorough-going way. For instance, the official report notes that the expenditure of ammunition during the second week of the Battle of Arras was six times as great as for the corresponding period of the Somme campaign, and was the *greatest* ever recorded.

III. The Second Battle of the Aisne

THE FRENCH ATTACK

The French struck their blow just a week later than their allies. East of Soissons, near the old Fort Condé, the Germans have since 1914 maintained a bridge-head south of the Aisne. Farther east, their line crossed the river and rested on the parallel ridge of hills to the north, then left the Craonne plateau to recross the Aisne near Berry-au-Bac, and tie into the forts north of Rheims. Against the twenty-five-mile front from Vailly to Berry-au-Bac, the French advanced on April 16, after an artillery preparation which had lasted (the Germans reported) ten days. This attack found the Germans better prepared than had the advance from Arras. The French secured no such depth of penetration; nowhere did they break the enemy's line. But their gains were considerable, averaging about two miles over the entire front. The Germans were driven from the bridge-head near Fort Condé; and Vailly, an important town just across the Aisne, was stormed from three directions (April 20). The advance north from here at this time, together with the eastward movement from Laffaux, created for the moment a pocket which seemed to threaten the capture of a large force of Germans.

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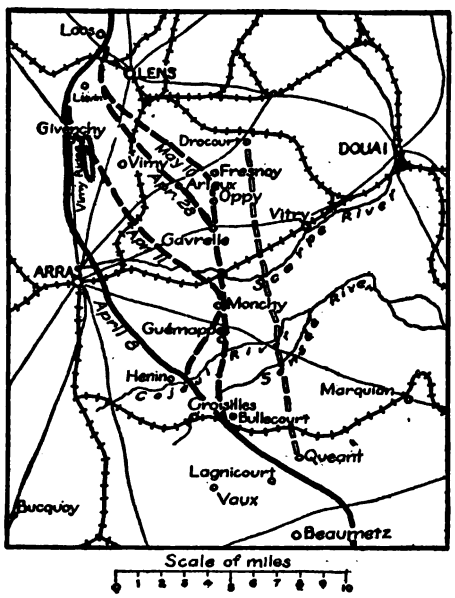
On April 21, however, with the capture of Sancy, this salient was eliminated and the line straightened once more, marking a maximum advance of four miles opposite the captured bridgehead.

The position of the French on the north bank of the river was now much improved; the Germans had been driven back to the crest of the hills or beyond. Most significant of all, the



II. THE BATTLE OF ARRAS

The dotted lines show the wedge that was driven in the first days, and the successive advances that widened its point. The supposed location of the Drocourt-Queant line is also indicated

French had taken at the end of the week's fighting, full 20,000 prisoners, besides 100 guns. The Germans were left in possession of a strong line extending along the ridge between Craonne and Fort Malmaison, and following the general line of the Chemin des Dames. Their counter-attacks, although vigorously pressed, failed to shake the French hold on the newly-won positions.

A PARALLEL ADVANCE

Meanwhile, farther east beyond Rheims, another French attack had been developing almost coincidently. Here the German line ran nearly due east along a series of hills, touching the old Champagne battlefield at Auberive. The four forts north of Rheims, which the Germans had strengthened in accordance with modern principles, made an obstacle so formidable, it seemed, as to preclude any advance from Rheims such as the English had made from Arras. The French were compelled to make separate attacks on either side—attacks which, by their converging directions, might hope to turn the barrier presented by the forts. On April 17 the French struck over a ten-mile front, advanced their line a mile or more to include a line of hills near Moronvilliers, captured Auberive, and took 2,500 prisoners. The fighting in this sector was continued more or less vigorously during the next two weeks, and assumed an unusual intensity on April 30, when the French threw forward their infantry again. No additional noteworthy advantages have been gained, however, in this sector.

RECENT GAINS

The fighting on the Craonne plateau continues, with results that have been favorable to the French. Their most important recent gain was the capture (May 4) of Craonne, a town of some importance at the eastern end of the ridge. An incident of this attack, which throws light on the depth of the dugouts and the use of grenades in an assault, is thus reported:

> "A French assaulting wave of infantry found a deep cavern at the foot of a steep cliff, west of Craonne, into which the renadiers threw grenades while their

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comrades continued to advance up the slope. When they arrived at the top they observed a column of smoke pouring out of a hole on the summit of the plateau and soon afterward a crowd of Germans numbering about 200 in all came out, having climbed 180 steps through a chimney cut in the solid rock from the cavern below. The French had scaled the cliff quicker than the Germans had come up the stairs, and they took all the Germans prisoners."

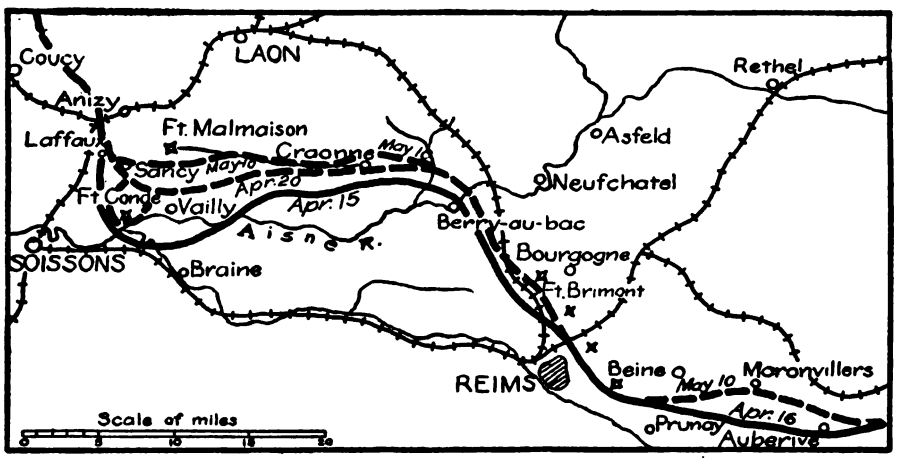
PRESENT SITUATION

Almost the entire crest, which is traversed by the Chemin des Dames, is now in their possession, save a part of the Vauclerc Plateau and the western end dominated by Fort Mal Maison. The heights that the French now occupy command for several miles the country toward Laon. A considerable success now would not only secure that city, but would force a realignment of the entire Arras-Soissons front, the flank and rear of which would thus be seriously threatened. But nothing has developed thus far to make such a success a near probability. The French, like the English, must keep as their objective to crush the man-power of the German army, using their own thinned forces as sparingly as possible in the process.

IV. The Hindenburg Line

PROGRESS AGAINST THE GERMAN CENTRE

The developments along the centre of the newly established German line have been quite over-shadowed by the battles at both ends. Yet there has been some severe fighting on this front, and changes in the alignment that would have attracted more attention under other circumstances. Toward Cambrai from the southwest, the British have pushed their lines forward some miles; northwest of St. Quentin they have drawn the net closer about the city, until they are less than a mile from its walls. The heaviest fighting of the month was in the vicinity of Lagnicourt. Here the British advance beyond Beaumetz, toward Cambrai, had created a marked salient in the line. Against the left flank of this



III. THE SECOND BATTLE OF THE AISNE

The dotted lines show the successive French advances both west and east of Rheims

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salient the Germans made vigorous attacks on April 14 and the following days. Their initial successes at Lagnicourt threatened to embarrass this whole part of the British battle-line; but by the 18th the English had made good their position, one body of Prussian guards having been driven back on its own wire entanglements with heavy losses. At the end of the month the British had pushed beyond Trescault and Gonnelieu, to within about seven miles of Cambrai. Farther south, their forces had advanced with little opposition to Vendhuile, on the St. Quentin Canal two miles from Le Catelet. St. Quentin, like Lens, still resisted capture; though the tightening lines threatened at any time to cause their fall, the real strength of the Allies was being exerted elsewhere.

BREAKING THE GERMAN LINE

It seems increasingly evident that the "Hindenburg line," as originally conceived, is non-existent; that German reliance is placed not on a single rock-ribbed line, but rather on a flexible system of echeloned positions, a series of switch-lines leading up to and supporting one another. The Allies' task of breaking such a line—of forcing a general retirement—is manifestly a stupendous one. Moreover, recent estimates of the German field forces do not indicate that the shortage of man-power is becoming acute. Such estimates have placed the strength of their field armies all the way from two and a half to four and a half millions, of whom perhaps two-thirds are on the western front. German losses have been admittedly over four millions, one half of which may be regarded as permanent. But these have been offset to some extent by the utilization of impressed Belgian and French laborers, thus freeing fresh men for the front. These considerations emphasize the seriousness of the situation that would have to be faced, were the Germans relieved of concern for their eastern front, and free to throw all their reserves into France.

V. The Far East

THE ENGLISH ADVANCE ALONE

The hopes raised by the prospect of effective British and Russian cooperation against the Turks in Mesopotamia have been disappointed. Since the Russian cavalry gained touch with the English forces at Khanikin, on April 8, they have apparently been quite inactive, although occasional reports have mentioned their presence in the upper Diala Valley. Meanwhile General Maude, without any evidences of Russian support, has continued with his main body up the Tigris, fighting an occasional action with the retreating Turks. While many of the disorganized Turkish units had retreated into the rugged Jebel-Hamrin hills, a part of their army fell back up the Tigris, opposing the British advance in that direction. A temporary stand was made on the Shatt-el-Adham River. A little later a Turkish force, attempting to defend Istabulat, lost over 1,200 prisoners. Finally, on April 22, the Turks stood six miles in front of Samarra on the strongest line they had held since leaving Bagdad. They were driven out by a night attack however and evacuated Samarra the next day. With this town, the northern terminus of the isolated end of the Bagdad railroad, the British took 16 locomotives, over 200 trucks and other rolling stock. Samarra is about seventy-five miles up the Tigris from Bagdad. Since then little progress has been reported; the weather is becoming unfavorable and the project of a summer campaign beyond the rail-head, if contemplated,

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presents problems which explain any present inactivity.

RUSSIANS ABANDON MUSH

Not only have the Russians failed to render help to the British; they have given ground to the Turks in Armenia. The city of Mush, forty miles west of Lake Van, has been an important outpost of their Asiatic front, affording as it does a favorable starting-point for an expedition against the upper Tigris seventy-five miles to the south. On May 2, their abandonment of this position was announced by the Turks. This retirement, which does not appear to have been a military necessity, is one of numerous bits of testimony as to the unsettled and disorganized condition of the Russian armies.

THE SIEGE OF GAZA

In spite of the initial success in front of Gaza, further British progress against that seaport has been slow. A British attack north of the Madi Ghuzze River on April 16 won the Turkish advanced positions over a six-mile front, an operation that was assisted by fire from British warships. On April 22, the main positions were reported to have been reached. Later reports have referred chiefly to the bombardments of the defenses. The report quoted last month that the British had reached Hebron, near Jerusalem, appears to have been a mistake caused by a confusion of names. The invasion is being directed along the seashore, and Jerusalem, which has strong natural defenses, has not been threatened by any near approach of the invaders.

VI. Other Fronts

WILL SARRAIL ADVANCE?

The March offensive north of Monastir, which won no notable advantages for the offensive, has not been renewed. Practically the only effort of the month was made by the British, who penetrated the Bulgar line south of Lake Doiran to a depth of 500 yards over a mile front (April 24). Subsequent counter-attacks were reported repulsed. At the close of this month of inaction, however, there were evidences of a coming offensive on a larger scale. Whether this was to be the long expected serious drive of Sarrail's army was by no means clear. More probably, it indicated that the Allies were attacking in force, in order that the Central Powers might not divert any men from this front for their lines in France. To invade the Balkans from Saloniki, through the narrow mountain passes and up the long and well defended rail-line—their own army supplied from over-seas—this is a task which the Allies may well hesitate to assume. Yet this large force—estimated at three quarters of a million—has been maintained at this distant base in the face of pressing need for troops elsewhere. The Allies have rated high the importance of Saloniki; but their purpose has remained a mystery.

RUSSIAN ACTIVITY AND APPREHENSIONS

A period of almost complete inactivity on the eastern front has been followed, since May 1, by a renewal of attacks on the part of the Russians at scattered localities. These are in the nature of holding attacks, apparently designed to prevent the withdrawal of German divisions for use elsewhere. The Russians have displayed a good deal of apprehension, particularly on the Riga front, where it was feared an offensive might be launched against Petrograd. On April 23, German transports were unofficially reported to have sailed from Libau, with the implied object of making a descent

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upon the Russian coast between Riga and Petrograd.

The situation among Russian high commanders was somewhat cleared up with the appointment of General Alexieff to the supreme military command. General Kuropatkin has been arrested by the revolutionists; and General Russky has also been deprived of his command.

VIII. Naval Operations

THE SUBMARINE CAMPAIGN

Of the submarine campaign which Germany is prosecuting so diligently, we receive but fragmentary reports—the number, not the tonnage, of the merchantmen sunk from week to week—with an occasional report of the loss of an Allied transport or hospital ship. Our own losses have been comparatively light. The *Aztec* and the *Vacuum* were sunk on April 2 and 28, respectively, before the gun-crews were able to fire a shot. Lieutenant Thomas and several members of the gun crew of the *Vacuum* were lost.

ONE HUNDRED PER CENT. GUNNERY!

The first shot fired in the war by the armed forces of the United States was aimed at a German submarine, which the American freight steamer *Mongolia* encountered in British waters on April 19. It was a splendid shot, made at 1,000 yards. Captain Rice of the *Mongolia* declared in a statement to the press, that the periscope of the submarine was seen to be shattered by the shot.

"I can't speak too highly of the cool manner in which the lieutenant handled his crew of gunners," said Captain Rice. It was a fine exhibition of the efficiency of American naval men."

The gun crew of the *Mongolia* was commanded by Lieutenant Bruce R. Ware, Jr.

IX. Summary

Altogether, it has been a month of ups and downs for the Allies. There has been much of encouragement in the splendid proof of strength of the new British army, and the continued excellent showing of the French in attack. But there has come, too, the conviction that Germany is strong still, too strong to be broken, and not easily to be worn out. It is not at all clear, as some critics have asserted, that the initiative has passed permanently to the Allies. The greatest efforts have not yet been made. Fresh developments in the direction of more open fighting are not improbable, and the great battles of the past month may but mark the beginning of a mammoth conflict, surpassing anything the war has yet seen.

And so the conflict stretches out, with little prospect of a military decision within the year. And to the Allies has been brought home a growing concern about the U-boats, that strengthens Germany's hopes. If this hope is well founded, she can afford to wait, abiding her time. To this uncertainty is added the problem that Russia's possible defection would present. More than ever, the war assumes a world aspect. Long ago, with Japan, Mesopotamia, Australia, Canada, and South Africa involved, it had outgrown the term "European War." Now, it is increasingly evident that the decisive factors may conceivably be, not the number and strength of a nation's fighting men, not even the effectiveness of its guns and fighting weapons, but fleets of vessels that are launched by thousands, the gardens a far-sighted people must plant—in short, the sum total of service and sacrifice that the nation's citizens stand ready to give.

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THE ARMY LOGOTHETE

[*This article records the impressions of an educated man of affairs experiencing for the first time the red tape of some features of army life. Written as it is in a spirit of good natured criticism, it yet points directly to various absurdities which must be eliminated to accomplish results with a citizen army.*—THE EDITORS.]

"But man, proud man,
Drest in a little brief authority,
Most ignorant of what he's most assured,
His glassy essence, like an angry ape
Plays such fantastic tricks before high heaven
As makes the angels weep * * *."
Measure for Measure,
Shakespeare.

IN FORMER ages, those engaged in sedentary pursuits—the clerk, the merchant, the banker, even the doctor—were regarded as of a lower order than the fighting man. They were recognized as necessary, for the money that could be squeezed from them was very useful in the carrying on of war. They were therefore permitted to exist, but only on the sufferance and by the grace of the fighting man.

In Germany we are given to understand this condition still exists. On the sidewalks of Berlin the civilian gives way to the soldier; if he does not, it is more than likely he will be shouldered into the street. In America, on the other hand, the man of affairs considers himself of more importance than the army officer; the clerk rates himself higher than the soldier. Since this reversal of conditions in this country is perhaps evidence that our civilization is of a more advanced type than the Germanic "Kultur," we will not quarrel with it.

The fact is noteworthy, however, that within the army itself it is the clerk and not the fighting man that inspires respect and awe. Throughout those large and important departments of the army other than the fighting units—the supply, paymaster, statistical, and medical departments—an attitude of casualness verging on the contemptuous is ordinarily maintained toward the field soldier. Perhaps the reason for it is akin to that which causes the white-linened ten-dollar-a-week clerk to look down on the overalled bricklayer earning his four or five dollars a day. But in the army, extra compensation is not paid the man who faces the risks, drudgery and hardships; and the assumption that he is of lower caste does not help to reconcile him to facing bullets, digging latrines and eating from greasy mess-kits.

The "medics" of the army are not great offenders in the matter of enlarged egos. Their peremptoriness and brusqueness sometimes arouse resentment, but it is pretty generally realized that the care of so many men necessitates an impersonal attitude toward each. Nevertheless, some of the callousness and carelessness shown in the medical departments could and should be guarded against. It is a fact that the soldier, once having experienced an army hospital, dreads to return. He will also frequently spend his meagre pay on a civilian doctor rather

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than rely on the judgment of a staff doctor or on a civilian dentist rather than undergo the agonies of the army dentist chair. The atmosphere surrounding the army "medic" is similar to that found in a large charitable hospital. It would be unjust to say that conscientious care is not given, but there is lacking nevertheless that close attention and consideration that the paying patient receives.

In the quartermaster and paymaster departments this attitude of superiority is most noticeable. It may be accounted for by the fact that the members of these departments possess the power of disposition over supplies and money necessary to the soldiers' comfort and health. They alone are familiar with the ramifications of the red tape surrounding its distribution. If, therefore, the bearer of an urgent requisition for supplies does not present the same with the proper amount of deference, he may see the requisition held up on some technicality, actual or fancied. On his return to his organization without the supplies, he is soundly berated by his commander and sent back to try again. Unless he is of peculiarly stanch makeup, his second presentation of the requisition will be accompanied by bowing and scraping and other conciliatory manifestations. Even the gruff field commander will lower his voice in the sacred precincts of the supply departments. It is not humanly possible to maintain consistently an attitude of superiority toward the man who can withhold the things which you want and must have. On the other hand, it is an unusual man who, possessing this power, yet restrains himself from using it to impress his importance upon the man who is by force of circumstances dependent upon him for the necessities and comforts of existence. The men in these departments are not unusual men. They are commonplace, although some of them are no doubt good clerks and a few are good office executives. In the state militia they are usually political appointees and in consequence many of them are not even good clerks. In brief, they are for the most part small men and have the small man's susceptibility to the "swelled head" under slight provocation. Suddenly taken from a small civilian job and given the rank of lieutenant, captain or major, their officers' hat cords constitute in their own eyes a halo quite disproportionate to the abilities that lie underneath.

Of necessity, the field soldier's service is mostly given to doing the hardest kind of "dago" or "hunky" work. His self-sacrifice should be recognized as such, not made the badge by which he loses caste. The lack of consideration shown him throughout the other departments is not good team play, for a certain amount of self-esteem is essential upon which to build up his morale. The importance of this attitude, however, lies in its being illustrative of the type of men now burdening these important departments of our army. They are men whose concern is chiefly to compel the recognition of their individual importance; secondly, to enforce minute observance of the interminable red tape of their departments; and thirdly, in the state militia, to bring about small economies which may be later used as talking points in their political campaigns. The real reason for the existence of their departments, namely the prompt turning out of troops equipped for effective fighting, does not seem to occur to them. The following annoyances experienced by one battalion of artillery during the period of the Mexican mobilization is typical of their lack of foresight and unreasoning adherence to red tape:

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Full war strength equipment in horses (about 500) guns and other ordnance was unloaded on this organization. The need of a picket line had not been foreseen by the quartermaster. In fact, he not only stated that picket posts and rope were not available, but this literal-minded official even had the temerity to maintain that he could not furnish them because they were not prescribed by "G. O."—some number or other. A small-sized hemp rope was finally cajoled from him, but the picket posts had to be bought with private funds. There were not enough halter ropes on hand and bailing wire had to be used, resulting in many badly burnt hands. The necessary quantity of hay had not been foreseen, and that furnished was of poor quality. This resulted in the horses breaking loose to forage for themselves. There were not enough rakes and forks, and for weeks the men literally had to do stable police with their hands. Cleaning materials for harness and guns had not been obtained ahead, and this expensive equipment was allowed to suffer until soap and oils could be gotten through the regular roundabout army channels. Yet there was a large city near at hand. It was midsummer and the men were suffering with dysentery, probably caused and spread by flies. Nevertheless, five weeks were spent in getting lumber and screening for the cook shacks. Three months elapsed before the men received their complete equipment of clothing. A sufficient supply was on hand, but it appears that some technical difficulty was anticipated with regard to the State's being reimbursed therefor, by the Federal Government. In the meanwhile many men had but one suit of underclothes; some few finally had none and a number of recruits went for days without uniforms and with broken-down shoes. A technical difficulty of the same nature arose with regard to paying the troops. Having been mobilized for a Federal purpose, they were to be paid by the Government and not the State. But some details were unsettled, in consequence whereof the men received no pay for several months. During this period they had no cash to eke out their scanty clothing or to send to dependent relatives.

The following incident cannot be called typical, but nevertheless actually occurred in one of the State mobilization camps: A local rule required a commissioned officer to accompany a requisition and be present when the supplies called for were given out. It was a short-sighted rule, as it usually compelled the officer's absence from drill for several hours in order to attend to a matter which the supply sergeant of his organization was entirely capable of handling. A battery which had lately arrived in camp was in need of supplies of all kinds. A requisition covering two pages was filled out and the battery's first lieutenant was sent with it to the camp quartermaster department. He was accompanied by a mule-team wagon and a detail of four men to load the supplies. The requisition was first presented to the quartermaster himself. He read it through and then, after referring to G. O. 39, went through it again, blue pencilling item after item. Upon inquiry it was discovered that these items were not included in the equipment prescribed for field service. The camp was not of the kind contemplated by the rules prescribing equipment for field service, nor yet was it a garrison. Wherefore equipment prescribed for field service would be issued only. After leaving this official the requisition was taken to the lieutenant in charge of the storehouses. Here the blue pencil was used to cross out items which were articles of issue but which

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the department did not have on hand. When he was through, three items only were left to be filled. One of his helpers was sent to get these articles but came back almost immediately, remarking that the last of the supplies called for by the first two items had just been issued out to another organization. The third item was delivered to the waiting lieutenant and receipted for. He placed it in his pocket and returned to camp with his mules, wagon, and detail of four men. It was a top sergeant's whistle.

An experience of another officer with the paymaster corps of the regular army is particularly illustrative of the lack of consideration sometimes shown the enlisted man. His organization had received orders to return to their home stations for muster out. About sixty men who were not residents of the state to which the organization belonged, were to receive their discharges and be paid off on the Border. Orders for the discharge of these men were received only a few days before the date set for entraining and at a time when the officers and clerks were inventorying and boxing supplies preparatory to departure. By staying up two nights in succession they managed, however, to straighten out these men's clothing accounts and prepare their descriptive lists and discharge papers. The last papers were ready at eleven o'clock of the day on which the organization was to leave. Accompanied by the officer above mentioned, the men departed for the paymaster's, carrying their few belongings with them. Upon submitting the papers to the paymaster, the officer was told that it would take some time to figure the amounts due and that he was to return with the men at four o'clock. He did so, but it was five o'clock before the first man was paid off. Promptly at six o'clock and while there were twenty-one men yet to be discharged, the sergeant handling the payments announced that he was through for the night, explaining, however, that the balance of the papers had not been examined and that it would take several hours to go over them. The officer appealed to the paymaster, telling him that camp had been broken up and the balance of the organization was already entrained; that few if any of the men yet to be paid off had money with which to buy food or lodging. The paymaster took the position that the papers should have been put in his hands earlier in the day and that he would not keep his men overtime. It was explained to him that the orders for the discharge of these men had arrived only a few days before and in the midst of the confusion and work of packing up; and that the organization clerks had been compelled to work nights to complete the papers when they did. Arguments were of no avail, and officer and men finally took their leave. The impression should not be given that the twenty-one men were left without food and lodging. An appeal to the provost guard of the town would have secured them lodging of a sort, and possibly food as well. Moreover, before leaving to catch his train, their officer gave them all the cash he had available. The treatment accorded them, however, was not such as they had a right to expect after nine months' patriotic self-sacrifice, and was not of a kind that would stimulate recruiting for future calls.

It is not the purpose of this article to leave the impression that the troops suffered while on the Border or are now suffering any real hardships. Food was at all times plentiful and of good quality. The men were inconvenienced during the first few months by scarcity of clothing, but their health was never endangered thereby. It is significant,

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however, that in spite of the fact that the whole force on the Border was picayune in comparison even with a Balkan army, yet the supply departments were greatly embarrassed in equipping it. In the event of war with an European nation,* these departments of our army will unquestionably have to be reorganized from top to bottom. The present incumbents will have to be displaced by men of real business experience and ability, of broad grasp and vision. Moreover, much of the red tape in which the departments are now enmeshed, will have to be swept away.

*The article was prepared before the declaration of war.

OUR LAND GRANT COLLEGES *as a* MILITARY ASSET

By EDWARD ORTON, JR.
(*Ohio State University*)

IN 1862, when our country was in the throes of civil war and our battlefields and camps were giving ghastly evidence of the folly of sending men to war with untrained leaders, Senator Justin Morrill of Vermont introduced in Congress and pushed to passage a bill which awakened but little interest and concern at the time, but which was in reality the biggest preparedness measure which this country has ever enacted. It was preparedness both economic and military: preparedness which stresses and accents the arts and industries of peace, while constituting an effective safeguard against the exigencies of war.

Almost every one in this country knows in a general way that we have in the United States a splendid system of state universities and colleges. Of their exact origin and mode of support the public is not so well informed. The fact that they have sprung from the land grants provided by the Morrill act, and are literally national as well as state institutions, is by no means well known or appreciated. But their contribution to the life of the nation in better agriculture, better industries, better social ideals and practices, has been so brilliant, so deeply felt and generally recognized, that I venture to say no community remains unaware of it or unappreciative of its value.

Naturally, in the half century of practically unbroken peace in which this wonderful system of higher instruction has been evolved, the public has learned chiefly of the industrial, economic and social side of the colleges' work, and senses but dimly the fact that in time of war their contribution is likely to be startlingly important. A fuller understanding on the part of the public of this whole situation seems necessary, and when gained it will bring fresh devotion to these colleges and fresh laurels to the memory of the man who foresaw their need and brought them into being.

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The Morrill Act, in brief, did three things. First, it provided for large grants of public land to finance this system of colleges. Second, it provided that the states should severally take over their respective grants and administer them. Third, and most important of all, it defined as the purpose or policy of these schools an idea new in American education, viz:

> "* * * *to the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the several states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Three things in this curriculum, it will be observed, are mandatory—agriculture, the mechanic arts, and military science. Other things are permissive. By this simple device did this wise old lawmaker see to it that the national bounty should not be dissipated in merely creating a fresh lot of colleges of the traditional academic type.

In the second provision, by which the several states were given the right to administer their respective schools and interpret in what ways and to what extent the various educational requirements should be met, the strongest characteristic of American thought is seen, viz., the doctrine of local self-government and the abhorrence of overhead control. Doubtless we owe much to this principle, but we certainly have suffered most grievously from it as well. To maintain it, we have sacrificed national efficiency and national feeling. We have grown slowly towards the best way of doing things, hampered and detained always by the pace of the slowest and most backward member in the procession of the states.

In no part of this educational plan was the local control so seriously felt as in the military requirement. Each state had the power to determine what kind and amount of military instruction it would give. Naturally, we had as many kinds as there were states. Some schools, under the control of anti-military faculties, gave the minimum possible amount which could be called a course of instruction—so little as to have no value at all. Others went to the opposite extreme, making schools where the students lived under a military régime all the time. In the beginning, the War Department took practically no concern for these schools or the military training they gave, but merely issued the rifles and equipment, sent an officer as instructor when required to do so and practically washed their hands of further responsibility. This attitude, while not broad minded, was very natural; the War Department saw that it could not order anybody to do anything. No organic connection between the schools and the War Department had been created—in fact, the Congress had seen to it that no direct Federal control should be exerted. What soldier would care to expend much energy on a system where he could only advise, with no power to decide?

Nevertheless, as the schools grew larger, and coöperation between them became stronger—fostered by a national association for this purpose—their military systems along with other subjects began to be compared and coördinated. The need of more military instructors being felt, the law

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was changed to permit more officers being detailed for school duty. Two or more times this was done. Other legislation also was adopted, strengthening details of the system. This tacit recognition of the dependence of the military training in the schools on the coöperation of the War Department had its effect, and more careful inspections were given. Then finally an attempt to discreetly suggest a uniform minimum military course was made. The War Department had no power to enforce a minimum course, except indirectly by taking away its officer instructor. Any school so treated could go ahead under a privately employed military instructor if it wanted to; but good sense prevailed and the minimum course was accepted.

It must be remembered that the preceding paragraphs are summarizing the history of nearly a half century of work. During this time several hundred thousand young men have attended these schools and have drilled and been taught military science by army officers. Though the work has been unsystematic from a national standpoint, and has varied in quality in different places, it was always given under men who were in a way the pick of the army. Details for teaching duty were not handed out to any officer who wanted a change. His education and his general fitness to handle this kind of duty were always carefully considered, and resulted in a splendid class of men being sent, and a good type of instruction given.

The worst result of the lack of direct control by the War Department of the military instruction given in the land grant colleges has therefore not been so much in the kind of instruction given as in the failure to make use of the trained product of the system. Because they did not control this product, War Department officials have always seemed to feel averse to giving any recognition to the young men who graduated from these schools, or to taking them into the army on any other terms than those open to the veriest tyro. It is true that in later years the ten institutions making the best showing in the annual inspections have been permitted to name one graduate each for entrance to the army as a second lieutenant without examination. But when one considers that this is only ten men a year from approximately thirty thousand students who are under military discipline, it is seen that it amounts to very little. Some few other graduates have gone into the army by appointment from civil life, by exmination, and other means open to any one else on equal terms, but the number is small. Virtually the entire male output of these schools, representing every geographical district in the country, and embracing the best blood and best brains of their respective communities, trained for the most part in natural science and its application to the industries and more or less adequately in the elements of military science, has been allowed to disperse and drop back into the vast body of our population, without the slightest effort being made by the War Department, the colleges themselves or any other agency to hold them together or to connect them with the military needs of the nation. Could folly be greater than this?

The futility of this military instruction—its failure to lead to anything definite or to be connected tangibly with any military organization or purpose—has been the most depressing thing about its development in the colleges. Can anyone blame the student who asks: "*Cui bono?*"

All this has made it fashionable with

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young men to pretend to dislike the drill. There is something attractive and fascinating about military evolutions to the average man, and students particularly would respond to this influence if it were placed on a parity with other subjects, and equal academic credit given for equal work done. Unless equal respect is paid to it as a component of a man's preparation for life, who can expect students to take it seriously? Why should a young man who has drilled several years, studied tactics, and commanded cadet troops, not be regarded upon graduation as being as competent for a military career, as a young civil engineer or doctor, or journalist, is for the career for which he has prepared? This wrongheaded attitude on the part of faculties, War Department, and the public in general, has done its best to minimize the value and take the snap out of the miltary training given, and but for the absolute requirement of the basal law, would have long ago resulted in the abandonment of the whole plan. That the latter has done as well as it has, and has achieved the solid results that can be shown, is due to the inherent value of military training in itself as a component of a man's education. We have gotten our benefit from it in spite of the system rather than by its help.

If, beginning twenty-five years ago, every male student graduating from a land-grant college who had completed the required military work of his course, had gone automatically into a reserve corps for a period of ten years, and had been required to pay for the education which the state and nation had given him by serving two weeks each year with the colors to keep his military knowledge fresh and to retain his efficiency as a possible officer, think what it would mean to the country now—trembling on the brink of a war that threatens to tax our every resource to the limit, yet without any supply of officers to enlarge the army.

Every intelligent citizen knows that an army is fundamentally dependent upon its officers. No army can exist at all except by the organized intelligence of its controlling power. Officers are the one thing that take longest to manufacture; and, they are needed first. Munitions— equipment—everything else can better be spared in the beginning; because with trained intelligence to direct it, the mighty forces of an army can be applied to remedying any other shortage. We have been spending our public funds for half a century to make fit material for officers, and have thrown them in the discard at the very time when they were ready to be of use. It is hard to reconcile such a thing with the keenness, good sense and business efficiency which we Americans are fond of believing we possess!

Nevertheless, from the wreck brought about by our inborn and cultivated hatred of militarism or too much governmental control, we must try to draw what good still remains left to us. We must not forget that the men who have had this combination of civil and military education are still alive and still with us, and that they possess in just as large measure as any others the emotions of patriotism and self-sacrifice. Unready and soft and out of condition they are. Rusty on military matters they are. But they have the power, thanks to their training, to rapidly get back into form. And we shall see them, in the national emergency, the mainstay of our army and navy.

It is not to be inferred that the graduates of a land grant college are inherently different from or better than the graduates of other institutions of learning. Potentially, one should

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be as good material as another. But in most cases the battle goes to the one who is ready. Belgium would never have been ravished, if the armies of France and England had been given time to get ready. And so here, the value of the land grant colleges as a military asset lies in the fact that they have been giving every male graduate this work for the last half century. Further, the work has been obligatory. Too much importance can hardly be attached to that fact. The hastily organized volunteer activities in other schools, during the few months past, are of course good and laudable, but all military men know that discipline is founded upon authority and that military training founded upon voluntary attendance is never successful for any long period of time. It may do well in times of popular excitement or danger, but it relapses as soon as the stress is over.

In estimating the present and immediate value of the land grant colleges as a military asset, we must take cognizance of the fact that the students have always been officered by their own members. The minimum requirements laid down by the War Department have been held at two years' training, for about fifteen years past. But the cadet officers have been selected from those who voluntarily continued the drill after completing the first two years. There has never been a time when enough young men were not ready to serve an extra year or two, in order to act as officers. The usual plan has been to make every student drill his first year as a private, and hold him eligible as a non-commissioned officer in his second year. Rarely, extra competent sophomores have been given commissions. Out of all those who drill, the proportion of those who become officers can hardly be higher than one in ten, and is more likely to be nearer one in twenty-five.

These student officers, who have had three or four years of drill and who have had very exceptional advantages for acquiring experience in handling troops, will constitute the readiest material for officers for a suddenly expanding army that we can hope to secure. Their number is not accurately available, but of those under forty-five years of age probably does not exceed ten thousand. The Ohio State University has just completed its roster of such ex-officers, and finds about four hundred. At least ten other schools have as many each, or more.

The number of students receiving military training has been growing steadily since the land grant colleges were established. It now amounts to nearly thirty thousand men per annum. Since the vast majority of these men take two years of drill, it would not be safe to count on more than fifteen thousand men completing their training annually, and this figure represents only the last few years. A conservative estimate of the total number of ex-cadets under forty-five years of age would be one hundred and fifty thousand, and a liberal estimate two hundred and fifty thousand. When it is remembered that these men are college graduates, are men of prominence in their communities, and that they have all had at least two years of fundamental infantry training under army officers, it is easily seen what an asset they are at this time.

The legislation adopted in the Hay-Chamberlain bill of June 3, 1916, contained two provisions which together go far to take up the slack in the military provisions of the Morrill Act. These are the officers' reserve corps and reserve officers training corps provisions. The limits of this article preclude discussion of these matters now,

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other than to say that the officers' reserve corps constitutes the legitimate gateway for the patriotic college graduate to enter his country's service, and makes the requirement of two years' military drill in every land grant college no longer seem a meaningless form and useless expenditure of energy, but a logical step towards an attractive goal.

An EYEWITNESS'S VIEWS on TRENCH WARFARE

By GERALD MORGAN

WITH the Germans on their own initiative taking up a new defensive line in France, the question recurs whether or not the offensive of the Allies can be successful in forcibly imposing on them the necessity of a still further retirement.

The writer's impressions are based on observation at Port Arthur in the Russian-Japanese War and some experience on the western front in France.

While the siege of Port Arthur may now seem remote, it is still instructive as bearing on the feasibility of breaking the German defensive lines because, as Captain Lynch explained in his article on trench warfare in the February number of NATIONAL SERVICE, the difference in the resisting power of the present trench works on the western front and the resisting power of a fortress is a difference of depth, which in a fortress is strictly limited.

Owing to the character of the terrain at Port Arthur it was possible for eye witnesses to watch the work of attacking infantry at short distances, and the writer of this article was so fortunate as to observe several examples of trench attacks.

As, for naval reasons, it was of the greatest importance for the Japanese to capture Port Arthur quickly, a general attack was made upon the permanent defenses as soon as they were reached. This attack was not successful, but did yield the result of the capture of part of one fort position. It was in the Japanese attempts to develop this success that the work of their infantry could best be followed.

After the failure of the general assault the Japanese planned a series of local operations against outlying Russian trench sections skirting the centres of resistance, which in this case were the outer line of forts, and also against two or three of the forts themselves. But even in the most localized operations the artillery preparation was found insufficient. So limited was the effect of the shrapnel and common shell on the Russian defenses that it was found necessary to continue the preparation not only after the infantry had left their trenches for the assault, but also until the curl of the wave had reached the positions to be taken, with the result that it was the rule, and not the exception, for the attackers to suffer losses from their own artillery. Larger how-

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itzers (280's) were then brought up and emplaced. The destructive effect of their fire, however, was not sufficient to reach the underground rooms and galleries with which the permanent forts had been provided.

After artillery preparation by guns of all calibres an attack, among others, was launched in September, 1904, against a trench section below the main fort of Kekansan. The distance to be crossed by the attackers was about 150 yards. They were armed, some with rifles, some with grenades, as on the western front now. They charged in one wave only, but as some ran faster than others, the appearance of the charge was similar to that of a football field after the kick-off. Imagine two hundred men running up a field at once, and a fair representation can be pictured.

The attack began to suffer casualties from the moment the men left their trenches, chiefly as a result of rifle and machine-gun fire from neighboring positions. But it was not until the Japanese had almost reached the trench section attacked that they suffered seriously. At this point, Japanese supporting artillery having ceased to fire, the defenders of the Russian trench got in at least one murderous volley. Hand-to-hand fighting followed, in which the greater physical strength and stature of the Russians gave them the advantage. They very noticeably used their rifle butts as clubs, for one thing, although they employed the bayonet as well. For the attack on the particular trench section here described no foothold was ever gained by the Japanese.

The balance of the attacking party now attempted to save their lives. The larger number took refuge in a small piece of ground which was partially protected, and there awaited nightfall while suffering considerable casualties from long-distance dropping fire. Others attempted to regain their own trenches, but none of these escaped.

Shortly after this attack another took place upon a similar trench section, but in this case the distance to be crossed was only fifty yards. The difference was remarkable. The attackers reached their objective almost without loss, and threw their grenades into the Russian trench. Resistance was impossible. Most of the defenders, about forty men, attempted to escape uphill, across the open, to a supporting trench two hundred yards away. They were exterminated.

The two attacks here described were attacks on trenches. The attacks made upon the permanent forts were uniformly unsuccessful. The Japanese artillery was never effectively destructive. One attack made with scaling ladders against the north fort of Kekansan was a veritable massacre. The whole hillside was black with Japanese dead and wounded. The fall of this fort, when it came, came as a result of extensive mining and, as a matter of fact, Port Arthur fell as a consequence of mining operations rather than of direct infantry assaults.

Had the Japanese possessed such guns as the Germans used against Liège, Port Arthur could have been taken quickly, and with little loss of life. The centres of resistance on the western front, however, appear to be proof against even the heaviest howitzers. This is no doubt due to the greater distance underground at which the protective chambers are situated.

The fighting at Port Arthur was the nearest approach to the trench war on the western front which had ever before taken place. The Japanese, however, lacked competent siege artillery, and, therefore, placed a greater burden on

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the infantry than that arm could successfully bear. They did, notwithstanding, develop during the course of the siege some of the methods now employed in France. For instance, they were the first army to reintroduce the use of grenades. But in spite of all efforts it was the Japanese engineers, not the Japanese infantry, which eventually conquered the defense.

My own personal observation, at Port Arthur and on the western front, leads me to believe (my opinion is merely that of a non-technical witness) that the strength of the defense has increased in modern times to a point where the burden upon attacking infantry is becoming intolerable. The enlargement of the population of Europe is now such that there are men enough to man fortified lines encircling the greatest nations. All attacks are therefore frontal attacks. No war that does not quickly succeed can fail to degenerate into a siege sooner or later. What is true of Europe, however, with its large population, is not true of America with its proportionately small one; and in America, war is almost certain to take the form of a war of movement.

Nevertheless, so far as Europe is concerned, it is rapidly becoming necessary for offensive weapons to keep a better pace with defensive weapons, when infantry is sent to the attack. Recently A. Tardieu, who has served as a member of the Headquarters Staff of France, as member of a Divisional Staff, and as a company commander of infantry, declared in the House of Deputies (of which he is a member) that frontal attacks on the western front were too costly to be further borne, and counseled a defensive war. Allowing for political bias, it is nevertheless true that the demands made upon attacking infantry are becoming excessive. No one who has ever witnessed an infantry attack upon a semi-permanent modern earthwork would ever doubt it again.

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MODERN BATTLE TACTICS

By CAPTAIN IAN HAY BEITH

(Address delivered at the Harvard Club, April 9, 1917.)

I WANT to talk to you to-night, if you will allow me, on a subject which I will label, "Modern Battle Tactics"—and that covers a great deal of ground. But naturally, at a time like this we want to get rather deeper into the matter than we usually go, and in that connection I am reminded of an old friend of mine, a master printer on a small English provincial newspaper, who used to divide all the matter which passed through his hands into two categories what he called news and what he called tripe. According to him news consisted of things like a battle, a murder, a suicide, a divorce, and football, while such matters as literature, art, the drama, and leading articles, came under the head of "tripe." I have been going around this country a good deal lately handing out to indulgent audiences what I think my old friend would have undoubtedly designated as "tripe"; that is to say, lectures of the anecdotal type, and I cannot tell you what a pleasure it is to get back for once, in a way, to something of a rather more concrete character, namely, a definite lecture on a technical subject.

I propose to divide this little discourse into three parts; namely, a very brief consideration of the factors which have made the present warfare what it is—namely, a war of machinery—secondly, a brief survey of the new weapons of offense and defence which the war has evolved by itself, and, thirdly, an attempt to describe a modern battle action.

First of all we have the factors which have made the war what it is, and those factors appear to be these: Primarily the huge masses of troops now employed present the greatest innovation. Instead of having selected armies we have whole nations deployed against one another, and the question naturally arises, why have troops never been employed on this enormous scale before? Well, I think it has been rendered possible by two things: In the first place—I don't know whether it has ever occurred to you—in the old days of warfare an army in the field subsisted on the country where it was fighting. Now such a thing would be impossible. On the British front in France to-day we have something like two million men, and every single one of those men draws his food, ammunition, his clothing—even the coke or the coal which he burns in a bucket in the trenches—from Hull. What made that possible is—first of all, the improved methods of preserving food. It wasn't until I went around the stock-yards of Chicago a few months ago that I really realized where the true base of the Allies lay. And secondly, improved methods of transportation, namely the automobile. Without those two things it would be impossible to maintain these great armies—they couldn't live on the country where they are fighting. Another great factor is the enormous

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improvement in health and sanitation. In those great armies to-day—although Heaven knows there is enough death and enough wounds—there is practically no sickness, due almost entirely to the methods of inoculation employed. In the South African War seventeen years ago the British losses amounted to about 20,000 men. About 2,000 of those were killed in action, and the remainder either died of enteric fever or of septic wounds. Now under the new and improved methods of service and sanitation, pestilence, and disease have practically ceased to exist in these enormous armies which are facing one another.

Another factor is the employment of artillery on an immense scale. It used to be said—in fact, many years ago it was asserted—that artillery on the whole was more noisy than dangerous. There was a good deal of truth in that, because the destructive power of the biggest shells was extremely local, and the shells were fired more or less blindly and the result was that as a rule it was possible to avoid them. They were fired by guess-work. Now, why is it that artillery has suddenly come to its own in this tremendous and emphatic way? The reason is the introduction of the aeroplane into warfare. This is an aeroplane war, and the more we look at the matter and the more we consider it the more it is borne out to us that the whole fabric of modern warfare hinges on the aeroplane.

Let me give you two or three reasons: An aeroplane can examine the enemy's position, all around and behind, and it can locate his troops, no secrets are hidden from it. Formerly the job of finding out the strength of the enemy, and the position of the enemy, was assigned to the cavalry, who pushed out as far as they could, collected all the information they could until they got up against a screen of the enemy's cavalry, when the information came to an end. Nowadays the enemy's aeroplanes can see you wherever you may be. It is no good concealing your troops behind a hill or behind a wood, because they can find you out. The result is that you have got to get under ground as you can't keep out of sight, and the result is trench warfare. Trench warfare is directly traceable to the aeroplane. An aeroplane can raid the enemy's positions, drop bombs upon his lines of communication. But this form of warfare is really more annoying than effective. The highest results of this kind were obtained by the Zeppelin, but the Zeppelin has been an acknowledged failure. A good many raids on our own country were made by the Zeps. They came over and dropped bombs indiscriminately and went away again, but beyond doing a certain amount of material damage and killing a certain number of inoffensive civilians, their military value was nothing; in fact, they have almost ceased coming at all.

Now we come to the third function of the aeroplane, and that is this—the most important of the lot: An aeroplane can direct the fire of the heavy artillery. That is why it has become worth-while to construct artillery of enormous calibre—twelve and fifteen inch guns—and fire them from a distance of, say, fifteen miles away at the enemy's position. Formerly they defined the enemy's position by map and compass blindly; now an aeroplane goes up, goes over the enemy's lines, and signals back to the battery by wireless telegraphy how the shots are falling, and tells them to move so many yards to the right or left or forward or back, thus getting the utmost value out of these enormous projectiles.

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So we see these three factors—the great masses of troops, the aeroplane and the artillery, have brought about these results. First of all they produced trench warfare—made it inevitable; and, secondly, they practically, for the present at any rate, have abolished strategy. The definition of strategy as opposed to tactics, is, everything which a general does with his troops before they get into actual contact with the enemy. In the old days you could outwit your enemy by forced marches. You could steal a march on him, get around his flank, divide his forces—the whole thing was like a glorified chess game. But how can you get around the flank of an enemy when he hasn't any flank, when he stretches from the North Sea to the Alps? Strategy is wiped out.

It is a very interesting speculation to consider what a great military genius of the Napoleon type, for instance, would have done under the circumstances. As you know, one of his favorite devices was to get between his enemies, attack one of them with extraordinary rapidity, securing a decision, and putting that force out of action before the other could come to its assistance, and then destroy the other force in detail. Well, as I say, it is a speculation, nothing more than a speculation, as to how he would have handled this impregnable iron trench running from the North Sea to the Alps.

And also the aeroplane has practically put the winning of a war, other things being equal, into the hands of the people who have got command of the air, and that fact has been fully recognized and brought out in recent warfare, as will be illustrated if I tell you that we now have more men in the Royal Flying Corps alone than we had in the whole British army before the war broke out. (Applause.)

Now, gentlemen, that is a rough outline of the factors which have brought the modern war to its present phase. I will now proceed, if I may, to consider briefly the new weapons and war-like devices which have been evolved by the war itself. Of course, every war always evolves it own weapons. Before the war the standard weapon was the rifle with a bayonet attached, and the rifle was considered, quite rightly—the magazine rifle with us, was considered, quite rightly—the most deadly weapon of destruction ever devised. But, now, when you have men fighting in a slit in the ground there is no elbow room to use the rifle and bayonet and you want something handier. I have seen men go into action getting into a trench with all sorts of close quarter weapons—bayonet, small grenade held in the hand, a knob carried in the hand and an entrenching tool, even a pick and shovel. But generally speaking the new devices come to this: We have first of all the machine gun. The machine gun, of course isn't a new weapon, but it is being so very largely expanded in its usefulness that it practically counts as a new weapon. Then comes the bomb or hand-grenade; thirdly, the trench mortar; fourthly, the use of gas or flame projectors; and, fifthly, defensive armor ranging from such things as the steel helmet, etc.

Taking these weapons in order, in detail, we come first of all to the machine gun. Now the machine gun happens to be the weapon upon which I myself have specialized, and I shall have to be cautious or I shall go on for a couple of hours on that topic. But to keep things down to the minimum, the importance of the machine gun can not be over-estimated. I know the Germans, I am bound to say, fully appreciated the value of the machine gun when they were making ready for

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war. When the war broke out they possessed something like 50,000 machine guns. In the British army, we had two machine guns per infantry battalion, making about 300 machine guns altogether. Under the force of bitter experience we have expanded that arm until I think you might say we have roughly a machine gun for every seventy or eighty men now fighting.

The characteristics of the machine gun boiled down come to this: The machine gun fires rifle bullets at the rate of about 500 bullets per minute up to a range of over nearly 3,000 yards. Although the effective range, and the usual range is very much shorter, they can be fired up to that range. And so, with this weapon we get an enormously high firing power combined with an extremely low manpower, which, of course is ideal and which we always aim at in modern warfare. A machine gun properly handled is considered equal to 100 men with rifles. Now, it is obvious that you can find cover for one machine gun handled by two men—it only requires two men to handle it—it is obvious that you can find cover for that single gun very much more easily than you could for 100 men with rifles. You may say that you are putting all your eggs in one basket if you trust to the machine gun. That is true, but it is very difficult to locate that basket, and it is a comparatively simple matter, if the gun is located and knocked out by artillery, to replace it, and, moreover, this one machine gun, handled by a trained gunner will fire much more steadily and accurately than the 100 men with rifles, because of those 100 there are bound to be some men who do not shoot as well as others, and the result will be a moderate average instead of a high state of efficiency.

Again, we have to make a very careful distinction, and no doubt it will be borne in on you when you come to grip with the subject, a very careful distinction between the machine gun proper and what we call the automatic rifle. In our own service we have two types of gun. We have the Vickers machine gun, which is a machine gun proper, and we have the Lewis gun, which, as you know, was invented by Colonel Lewis of the American army. The Vickers gun, or, if you will, the typical machine gun, possesses two most invaluable characteristics. First of all it possesses a fixed mounting, which means that it can be laid and clamped along a certain line on a given line, and fired with equal accuracy by day or by night by simply pressing a button, say, on a bridge which the enemy might try to cross. By simply pressing a button on the gun you can sweep the bridge whether it is light or dark. This gun possesses a water jacket which enables it to be fired continuously without any fear of overheating; but the Vickers gun weighs 45 pounds and the tripod on which it stands weighs 48 pounds—and, believe me, that is some weight, especially when you prance across broken ground; and it is quite impossible to carry a gun of that weight into action without taking a very severe chance of being spotted as you go.

Now, the Lewis gun, or, if you like, the automatic rifle, possesses no water jacket, which means that it can not be fired absolutely continuously. It is an air-cooled gun, and it possesses no fixed mount, which means that you can not fire it in the dark and must have a target by which to aim it. You can not fire by map or compass, but the Lewis gun only weighs 26 pounds. It can be carried wherever infantry can go, and it can go as fast as infantry can go; and as it can be

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carried on the shoulder at a slope like a rifle, it is very difficult for the enemy to locate it, if taken into action.

Last summer, when I was at home at the machine gun training school, whenever we had officers sent down to be instructed in the use of these guns, we used to give them a demonstration by having perhaps fifteen or twenty men advance in line, in open order, towards us carrying rifles at the slope and one or two of those men, instead of carrying a rifle, carried a Lewis gun, and we used to exercise the officers for whom the demonstration was given, in trying to spot which of those men was carrying the Lewis gun and which carrying a rifle, and it was extraordinarily difficult for them to locate it. You can imagine the value of that when troops are out to attack, if they can get even one Lewis gun—equal to 100 rifles—up into the firing line ready to give that enormous concentrated rifle support so badly needed.

The Lewis gun, provided it is kept decently cleaned, free from grit, practically never sets up stoppage at all. As regards the distribution of the duties of these two guns, the machine gun proper, that is to say, the Vickers gun, is usually put under the head of the brigadier general in command of the brigade, in a machine gun company consisting of sixteen machine guns under the command of an officer, who has eight officers under him, one officer to every pair of guns which enables them to be split up and distributed.

A machine gun company is a fairly large unit; requires about sixteen lumber wagons for shrapnel or ammunition, and about 60 horses, and this company is kept under the hands of the brigadier. The machine gun is a brigade weapon. It is sent wherever the brigadier thinks proper to augment the fire, and he usually keeps at least four guns under his command as a mobile reserve.

The Lewis gun, or automatic rifle, is purely a regimental weapon. We have so many Lewis guns now allotted to every battalion. They are under the command of an officer under the battalion commander. They go everywhere the infantry go, and, as I say, it forms an enormous auxiliary agency for firing, often of the utmost value, especially in the recent operations.

Owing to their reliability and their great portability, you can get them anywhere where infantry go, and as fast as the infantry can go. So much for the machine gun.

Now we come to the bomb or hand-grenade. Now, these bombs or hand-grenades are absolutely indispensable in trench fighting. As you know, a trench as a rule isn't straight. It is cut up at intervals by great square traverses of earth designed to localize the effect of a shell bursting, and it is quite impossible to get around in these traverses in a narrow trench with a rifle and bayonet, and the procedure, as a rule, is this? A party move up a trench in single file, throw two or three bombs from the first traverse into the next open traverse. The moment an explosion has taken place, three or four men go to complete what the bombs began, and so on around to the next traverse.

The original bomb was a home-made affair containing some scraps of old iron and some high explosives. The whole thing was topped off by a fuse which you lit with a match or cigarette. There were two drawbacks to this device. The first one was, if it happened to be raining—and it usually is raining when a battle is going on—the bombs would not light at all. In the second place, there was a certain want of standardization about the length of time the fuse would burn. Nomin-

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ally these fuses burned for ten seconds before the bomb exploded. Well, if you threw the bomb too soon there was plenty of time for your opponent to pick it up and throw it back. (Laughter.) And if you waited too long, you prejudiced your own chances of ever being able to throw it at all. (Laughter.) However, we have now a considerable number of types of very excellent bombs, one, commonly called the cricket ball, an oval shaped bomb, automatic and very safe to work. It consists of a bomb that will fit into the hand like a small cocoanut, down the side of it is an arrangement rather like a pump handle, which, if you let go will spring up and let loose a striker which lights a fuse inside. So long as the bomb is held firmly in the hand gripping the pump handle nothing happens. The moment you throw it, up goes the pump handle and the bomb explodes in five seconds. The other extraordinary type of bomb, or grenade to use the correct term, is what we call the policeman's truncheon, which explodes on impact. You simply hurl it and on striking the ground or your opponent it explodes. You have got to be careful with it, especially in a trench, because if you are not and should hit the back of the trench behind you it explodes just as efficiently there as it would later on. (Laughter.) And the tail of it—the tail end is also provided with long streamers to keep the tail up and head down as the bomb descends, and you have to be extremely careful that one of the tails of the streamers doesn't catch in your equipment as you throw it and bring the bomb back at you.

The next weapon is the trench mortar. That is a weapon that has really developed more than anything else. It is a very simple weapon, very cheap to construct, and has been very largely used to supplement artillery work, and it does it very well, in certain types of work, because, as I say, it is not an elaborate weapon like a gun, it looks more like an old piece of rain-pipe set up on end than anything else. It is very cheap, because it is just as simple to shoot a sixty pound bomb out of a trench mortar across "No Man's Land," perhaps two or three hundred yards, as it is to fire a sixty pound shell from an elaborate piece of machinery four or five miles away. You save your charge every time. Also, the trench mortar is very hard to knock out, for the reason that it is cocked up almost vertical. The result is, as the charge goes very nearly straight up in the air you can afford to sink the mortar into a pit quite deep down, ten or fifteen feet. The bomb goes straight up in the air, curves over and drops into the enemy's trench, and, as I say, it is very difficult to locate the mortar or knock it out with artillery, because it is not on the surface of the ground but fifteen feet below. The trench mortar is being elaborated a good deal now. We have one trench mortar now which will fire, I think, twenty bombs a minute, and I have seen seven or eight of these bombs in the air at once. It deposits bombs in a row along the enemy's parapet with a very disintegrating effect.

There is also what we might call an expanded form of the trench mortar to which the Germans are addicted. The minenweffer or torpedo thrower. They throw a thing which we call an aërial torpedo, or sausage. When I was in the trenches at Loos, we had the Hohenzollern redoubt opposite to us. They had very large mine throwers. The charge used to go up in the air, circle over our heads, turn somersaults and drop down, where after an interval of five seconds, it exploded with sufficient force to destroy at least one

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traverse and possibly two. It was a very peculiar affair probably five feet high. The one redeeming feature of this weapon was you could see it coming. It would go high in the air, curve over and drop down, and, as I say, it was an exhilarating pastime trying to dodge it (Laughter), although the game presented certain complications when played by large numbers of persons all in one trench, especially, when there was a difference of opinion as to where the thing was going to fall.

Next we come to the use of gas, or flame projectors. Gas when first used was undoubtedly the most dreadful weapon. The first time it was employed on us—chiefly against the Canadians and French—the results were absolutely horrible. Chlorine gas was employed, and, as you know, it attacks the membranes inside the lungs, and the blood, which ought to pass through the lungs and be purified by oxygen in the lungs, can no longer be purified, and the result was to throw a frightful strain on the heart, with the result that the men died after forty-eight hours of the most frightful agony, laboring for breath, of heart failure. Now gas has become more or less a back number for two reasons. The first reason is that everybody is now provided with very adequate anti-gas appliances, gas helmets, and so on.

In that connection—I hope you will pardon me if I digress to tell you the story about a gas mask. We had in our neighborhood, a General who was particularly anxious to enforce the rule that every man must have his gas helmet always about him ready to put on. The gas helmets are worn in small khaki bags, or a satchel, outside everything so a man can pull it out and put it on at once. The General announced one morning his intention of going around the trenches and making quite sure every man had his gas helmet. But, on the way, it was pointed out that he had not his own helmet. However, he remedied that discrepancy by borrowing the gas helmet of the nearest junior officer. When he got to the front line, he encountered a private soldier with no gas helmet, and the General who was very anxious to see that this sort of thing did not occur again, turned and sent for the man's sergeant and the officers responsible. When they were gathered around he told them what he thought of them for allowing this man to go without his gas helmet, and then, with a magnificent gesture, he said, "Take my helmet. But to be quite sure you know how to adjust this helmet, let me see you put it on." And the man, with trembling fingers opened the satchel and pulled out a very dirty pair of socks. (Laughter.)

However, gentlemen, I fear this is a digression; but that is one of the reasons gas has become a back number. Owing to the precautions taken against it, it is more annoying now than dangerous. To attack your enemy by gas means that you may have to wait for days in order to get the wind just right. The only kind of wind of any use for a gas attack is a wind straight behind you blowing three or four miles an hour. As you can imagine, it is extremely bad for the morale of troops who have been screwed up for taking the offensive, to have to hang up for a week waiting for the wind to change.

As for flame projectors, I have never actually seen them in operation. They are rather limited in scope. Worked by two men, one carries the reservoir and generator and the other a sort of hose-pipe arrangement with which he squirts flame at his opponent. I understand these flame projectors have

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not got a range of more than 25 or 30 yards, so if you happen to be 31 yards away with a bomb in your hands you have the flame projecting outfit stopped every time. But I think quite apart from everything else as regards the question of gas and flame projectors, I think they have got to be abolished once and for all when this war is over. (Applause.)

Just a word on this question of defensive armor. We have the steel helmet, introduced a year or so ago. They are a very simple affair, but they are a step in the right direction. They stop shell splinters, shrapnel bullets and turn aside rifle bullets so long as they are not at close range. They were very unpopular when adopted. They were heavy and unbecoming, and the men were extremely reluctant and refused to use them. They would hang them at their belt; wash in them—in fact, put them to any domestic purpose whatever, but they would not wear them. I always remember one day I met one of my men being carried down from the trench on a stretcher with a bad wound in the head, and I asked him how he got it, and he said, "All along of them new helmets." I asked for details and it appeared that this man had been hit on the head by the nose of a shell with the result that his steel helmet had been driven into his head and inflicted a rather nasty scalp wound, and although I pointed out to him that if it hadn't been for his helmet he wouldn't have had a head at all, he persisted in blaming the helmet for the whole thing. (Laughter.)

But of course the great defensive armor in this war has been the tank. Last year at the battle of the Somme our chief objective was a ridge of ground with a chain of almost impregnable forts, and although we fought up and up that hill—every time the final assault was launched the men went up—still the German machine gun men came up from their dugouts and mowed down our men. And then at last, up the hill one September morning, came this monster impervious to shrapnel bullets and even light field shells. They got to the top of the hill, got astraddle the German trenches, or sat down on machine gun emplacements, with the result that the place was captured.

By the way, there are extremely good moving pictures of the tanks in action, officially taken, and as soon as released I hope you take the chance to go and see them if you can, because they are really wonderful pictures. They give you an extraordinarily good idea of what a tank can do. Roughly speaking they are about the length of an ordinary Pullman car; from a side view they are diamond shaped, and they move along on tractors, two parallel tractors, which, as it were, lay down two parallel roads and pick them up behind, and down in front again. They go through shell holes; they knock down walls; go across wire, brush, wood, ford streams, practically nothing stops them except a very heavy mud. There are two types officially known as male and female. The only visible difference is the male is rather larger and is supplied with quick-firing guns as well as machine guns. Now, as regards the tank itself, whether it is a mere weapon of surprise or whether it is going to develop into a great land dreadnaught, so that in future we shall see land battles by enormous iron armor clads, is a matter of pure speculation which we can not enter into here, but I think you will admit it is a very interesting speculation.

I see in the paper to-night the new drive which is taking place between the Loos and Arras that the tanks are

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again in operation, and I think it is extremely probable that they are new tanks of a larger and improved pattern. So much, gentlemen, for the weapons evolved by this war.

Now, if you allow me, I should like to take a few minutes, in conclusion, to try to describe for you a battle-ground from my own experience.

An ordinary battle attack takes place now, as you know, on an extremely wide front, say, 10 or 15 miles. It is supported on either flank by other attacks, in fact, at the battle of Loos in 1915 we attacked over a ten mile front, but we were supported by attacks all around on the whole western front—70 or 80 miles—so as to disguise the true objective attack, or where the real attack was being made. As regards preliminaries: You can imagine the amount of preparation required for a battle of that magnitude—the rehearsing, the fitting together of the various arms of the service.

In framing operation orders nowadays, experience has taught our Generals and our staffs to keep in mind three things—first, the necessity of what is called a limited objective, or, if you like, a series of limited objectives. In the battle of Loos, which was what you might call an experimental battle, our orders were to get forward as far as we possibly could.

The extent to which an attack can get forward depends very largely on the degree of resistance encountered, and if the resistance varies at different points, the attack will get further forward at some points than at others.

Our own Division attacked in the centre and found the barbed wire very well cut. After encountering no particular opposition we got forward perhaps two miles. The Division on our right, probably the finest in the army at that time, never started at all. The wire had never been cut for them. They made most magnificent efforts time and again, only to be mowed down by machine guns. The result was that at the end of the day there was a gap of two miles between our left and right of the next division, and we had to turn around and do some very hard fighting before we joined up the two ends.

Now, in the last attack, such as this successful attack, the system is this: Every officer receives a trench map with a series of parallel lines. The first line is the first objective. When you get there—perhaps only 500 yards—you stay there until you are told to go forward, and nobody is told to go forward until the whole of that line is occupied and consolidated and so on.

Through the same experience in this same battle of Loos, we discovered that the further forward we got, the less support we received from the artillery, for the very simple reason that the artillery did not know where we were. Now, the whole battle operation is founded upon what the artillery are going to do and not what the infantry are going to do. The artillery set down a storm—a curtain of shells—along a certain line, the first line on the map, up to a certain hour. The infantry meanwhile range themselves behind the curtain. The curtain is so great that they can come close up behind it—as you might go down behind Niagara Falls. At a given moment the artillery lifts and the infantry go on behind it. In other words, the artillery sets the pace and the infantry follows, instead of vice versa.

And, thirdly, we had to learn by bitter experience, the enormously elaborate preparations to keep the roads behind the battle clear. Here is a little point that cropped up; recently, owing to the enormous expansion in

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the use of artillery and machine guns —as I say, where we used to have one machine gun we now have something like 15 or 20, that means that you want fifteen or twenty times as much small arms ammunition, and where a battalion had one wagon handling the ammunition for a machine gun it must now have perhaps five or six. If you multiply that by the number of battalions in a brigade that means 20 to 25 wagons to a brigade column; if you multiply that by brigades and division it means 60 wagons, and the result has been to throw more of a strain on ammunition columns behind and an enormous increase in the amount of transport. Of course, the same thing happens with the artillery, and, therefore, unless you are very careful, the roads behind are choked up by the increased transportation. And suppose you want to get another division out to support an attack, that division has to get right through the whole of the transport required for the division already up and has to bring its own transport up behind it, and you can imagine the enormous amount of preparation required behind the line to keep the roads clear.

However, the point of view of an officer in command of a company or battalion, is probably more interesting to us, and here are a few of the points which will occupy an officer's attention. In the first place, he has got to get acquainted with the ground he is going to fight over. For that purpose he will be given an aeroplane map or a very elaborate trench map, on which every tree and wood is shown. He has got to get that in his head so as to know exactly where he is. He has got to start in and study the general operation orders especially as regards himself.

Supposing he is a battalion Lewis gun officer, or bombing officer. He picks out from those orders, a great mass of them, every paragraph that concerns himself, then he writes his own orders and sees to it that his men know them thoroughly—and, of course, this question of written orders is particularly important, as a safeguard to himself, because in the event of anything going wrong, all he has to produce is the duplicate of his own orders, and if his orders were properly written he is absolved from all blame. And an officer would probably be employed in all sorts of preliminary work before the fight. Just to give you a single example: I remember before the battle or Loos being detailed to go and test the great new communication trench which had been dug especially for the wounded, and I was detailed at four o'clock one summer morning to take a stretcher and two bearers and four or five men with picks and shovels and go right through that new trench to see if we could get the stretcher around the curves. We started at four in the morning, the stretcher in front followed by the men with picks and shovels, and whenever we stuck going around a corner the picks and shovels were requisitioned, and I think it was half past eleven that morning before I got my breakfast. That is a typical example of a job that may crop up before a fight.

As to the actual attack itself, it usually takes place at dawn, while the guns, which have perhaps been thundering for weeks, suddenly, at a given moment, stop for but a few minutes while they adjust their sights and fuses with a view to lifting on to the second line which I have described, and then the infantry go over the parapet to attack.

You are now on to the fire of the enemy's machine guns, and there is only one question which interests you at the moment, and that is this: Has the enemy's barb-wire been cut for

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you or has it not? Because if it hasn't, there will be trouble. As regards the placing of these machine guns to cover the barb-wire, the old theory was—this is an important point—the old theory was that you took your machine gun and you played it like a hose upon the advancing enemy. Well, that was a wasteful and rather ineffective method. Nowadays, guns are placed in such a position so as to sweep a certain amount of ground as completely as possible, if possible along your own wire where the enemy are about to congregate. The guns are placed in such a way, that if all are fired at once, they form a lattice work of fire in front of the wire, and the enemy must walk through that fire.

The French have extended this system very cleverly. They now run out tactical wire opposite to the defensive wire. Machine guns are placed in position obliquely, a few strands of barb-wire running out as a continuation of the line of the gun, the result is when the enemy attacks he hesitates at this wire, with the result that he is very neatly strung out on the wire along the line of the gun.

However, we will assume the wire is cut in your case. You now find yourself in the enemy's front line trench. While in most cases there is not much trench left, and if there are any men in it there are not many, so you push on up to the communication trenches. These communication trenches are known to you because you have studied the whole ground from aeroplane maps. You push on with bombing parties and also guns driving the enemy to the communication trench until you get—if you have not gotten already—to your first objective, and there you stay.

Meanwhile behind you engineers and pioneers are hurrying across bringing material to help you reverse the consolidated trench. You have got to remember the parapet is on the wrong side. Sand-bags, barb-wire, etc. The machine gunners are hurrying up to consolidate the position, that is to say, placing their guns in such a position to sweep the ground in front of the newly captured ground in the event of a counter attack. The signallers are coming up unrolling wire as they come to establish advance telephone posts; ammunition, sand-bags, water, food, etc., are all being brought up by specially detailed parties; also parties with more bombs, more ammunition, to certain prearranged dumps in the new line where every officer knows their position and can send back for fresh supplies, and finally the commanding officers come up and advance headquarters is established, and your new line, your first objective, is consolidated.

In due course, probably there will be an intensive bombardment from the enemy, who, of course knows every yard of trenches. But that may come later. The chances are you will get forward to their second and third line before the counter attack. The Germans are extraordinarily capable of developing these counter attacks with great proficiency. At the battle of Neuve Chapelle and the battle of Loos—in those days we hadn't got the artillery we have now to support us—although we advanced a considerable distance on both laterals, we lost a certain amount of ground in both cases through counter attack. But it is interesting to note, that in the great battle of Somme Ridge, since July although positions are very hard to capture and hold, once the position was captured, so great is the preponderance of our artillery and machine guns and aeroplane superiority in our favor that not one counter attack

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has ever really succeeded in getting hold of ground once captured.

So the fighting goes on until nightfall comes, and then unless the casualties have been very slight indeed—in most cases they have been only too heavy—a relief force comes up, fresh troops come up and take over the newly captured positions from the men who have captured them, and they, or what is left of them, hand over their conquests, and go back under the friendly cover of night to their well-earned rest, with the comfortable consciousness that they have done the State some service.

SMALL ARMS FIRING REGULATIONS*

By Captain Ralph M. Parker
(2d U. S. Cavalry)

THE course herein prescribed has been arranged as follows:

(a) Nomenclature and care of the rifle.

(b) Sighting drills.

(c) Position and aiming drills.

(d) Deflection and elevation correction drills.

(e) Gallery practice.

(f) Estimating distance drill.

(g) Indidivual known distance firing, instruction practice.

(h) Individual known distance, firing, record practice.

(i) Long distance practice.

(j) Practice with telescopic sights.

(k) Instruction combat practice.

(l) Combat practice.

(m) Proficiency test.

The course of pistol firing includes the following:

(a) Nomenclature and care of the pistol, general facts and principles.

(b) Position and aiming drills and rapid-fire drills; dismounted and mounted.

(c) Individual firing, instruction practice.

(d) Individual firing, record practice.

SIGHTING DRILLS

Value.—The value of the sighting drills and the position and aiming drills can not be too strongly emphasized. By means of them the fundamental principles of shooting may be inculcated before the soldier fires a shot.

To Whom Given.—The sighting drills will be given to all soldiers who have not qualified as "marksman" or better in the preceding target year.

Purpose:

(a) To show how to align the sights properly on the mark.

(b) To discover and demonstrate errors in sighting.

(c) To teach uniformity in sighting.

Apparatus and its Use.—Sighting Bar to consist of:

(a) A bar of wood about 1 by 2 inches by 4 feet, with a thin slot 1 inch deep cut across the edge about 20 inches from one end.

(b) A front sight of tin or cardboard ½ by 3 inches tacked to the end nearer

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the slot and projecting 1 inch above bar.

(c) An eyepiece of tin or cardboard 1 by 3 inches tacked to the other end of, and projecting 1 inch above, the bar, with a very small hole (0.03 inch) $\frac{1}{2}$ inch from top of part projecting above the bar.

(d) An open rear sight of tin or cardboard $1\frac{1}{2}$ by 3 inches, with a U-shaped notch $\frac{3}{4}$ inch wide cut in the middle of one of the long edges. This is placed in the slot on the bar. A slight bend of the part of the tin fitting in the slot will give enough friction to hold the sight in any part of slot in which it is placed.

(e) A peep rear sight of tin or cardboard 3 by 3 inches, with a peep hole $\frac{3}{4}$ inch in diameter cut in the center. This replaces the open sight when the peep sight is shown.

Carefully blacken all pieces of tin or cardboard and the top of the bar. Nail the bar to a box about 1 foot high and place on the ground, table, or other suitable place. Then adjust the open or peep rear sight in the slot and direct the bar upon a bull's eye (preferably a Y target) placed about 5 yards from the bar. No other than the sight desired can be seen. Errors, etc., are shown by manipulating the open and peep rear sights.

Sighting Rest for Rifle.—Take an empty pistol ammunition box or a similar well-made box, remove the top and cut notches in the ends to fit the rifle closely. Place the rifle in these notches with the trigger guard close to and outside one end. (The stock may be removed from the rifle so as to bring the eye as near the rear sight as in shooting.) Nail a plank (top of box will do) to a stake or wall about 12 inches from the ground. Fasten a blank sheet of paper in the plank. Place the rest firmly on the ground, 20 or 30 feet from the plank, so that the rifle is canted neither to the right nor left—weight the box with sand if necessary—and without touching the rifle or rest; sight the rifle near the center of the blank sheet of paper. Changes in the line of sight are made by changing the elevation and windage. Take the prone position with elbows on the ground, hands supporting the head. A soldier acting as marker is provided with a pencil and a small rod bearing a disk of white cardboard about 3 inches in diameter, with a black bull's-eye (a black paster is best) pierced in the center with a hole just large enough to admit the point of a lead pencil. The soldier sighting directs the marker to move the disk to the right, left, higher, or lower, until the line of aim is established, when he commands "Mark" or "Hold." At the command "Mark," being careful not to move the disk, the marker records through the hole in its center the position of the disk and then withdraws it. At the command "Hold" the marker holds the disk carefully in place without marking until the position is verified by the instructor, and the disk not withdrawn until so directed.

FIRST SIGHTING EXERCISE

Using illustrations, describe the normal sight and the peep sight.

Using the sighting bar, represent the normal sight and the peep sight and require each man in the squad to look at them.

Using the sighting bar, describe and represent the usual errors of sighting and require each man in the squad to look at them.

SECOND SIGHTING EXERCISE

Using the sighting rest for the rifle, require each man to direct the marker to move the disk until the rifle is directed on the bull's-eye with the normal

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sight and command "Hold." The instructor will verify this line of sight. Errors, if any, will be explained to the soldier and another trial made. If he is still unable to sight correctly, the first exercise will be repeated.

Soldiers will sometimes be found who do not know how to place the eye in the line of sight; they often look over or along one side of the notch of the rear sight and believe that they are aiming through the notch because they see it at the same time that they do the front sight. This error will probably be made evident by the preceding exercise. Some men in sighting will look at the front sight and not at the object. As this often occasions a blur, which prevents the object from being distinctly seen and increases both the difficulties and inaccuracies of sighting, it should be corrected.

Repeat the above, using the peep sight.

THIRD SIGHTING EXERCISE

Using the sighting rest for the rifle, require each man to direct the marker to move the disk until the rifle is directed on the bull's-eye with the normal sight and command "Mark," then, being careful not to move the rifle or sights, repeat the operation until the three marks have been made.

(a) *The Triangle of Sighting.*—Join the three points determined as above by straight lines, mark with the soldier's name, and call his attention to the triangle thus formed. The shape and size of this triangle will indicate the nature of the variations made in aiming.

(b) *Abnormal Shape Causes.*—If the triangle is obtuse angled, with its sides approaching the vertical, the soldier has not taken a uniform amount of front sight. If the sides of the triangle are more nearly horizontal the errors were probably caused by not looking through the middle of the notch or not over the top of the front sight. If any one of the sides of the triangle is longer than one-half inch, the instructor directs the exercise to be repeated, verifying each sight and calling the soldier's attention to his errors. The instructor will explain that the sighting gains in regularity as the triangle becomes smaller.

(c) *Verifying the Triangle.*—If the sides of the triangle are so small as to indicate regularity in sighting, the instructor will mark the center of the triangle and then place the center of the bull's-eye on this mark. The instructor will then examine the position of the bull's-eye with reference to the line of sight. If the bull's-eye is properly placed with reference to the line of sight, the soldier aims correctly and with uniformity. If not so placed, he aims in a regular manner but with a constant error.

(d) *Causes of Errors.*—If the bull's-eye is directly above its proper position, the soldier has taken in aiming too little front sight, or if directly below too much front sight. If directly to the right or left, the soldier has not sighted through the center of the rear-sight notch and over the top of the front sight. If to the right, he has probably either sighted along the left of the rear sight notch or the right side of the front sight or has committed both these errors. If the bull's-eye is too far to the left, he has probably sighted along the right of the rear sight notch or to the left of the front sight, or has combined both these errors.

If the bull's-eye is placed with reference to its proper position diagonally above and to the right, the soldier has probably combined the errors which placed it too high and too far to the right. Any other diagonal position

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would be produced by a similar combination of vertical and horizontal errors.

As the errors thus shown are committed when the rifle is fixed in position, while that of the bull's-eye or target is altered, the effect will be directly opposite to the changes in the location of a hit in actual fire, occasioned by the same errors, when the target will be fixed and the rifle moved in aiming.

After the above instruction has been given to one man, the line of sight will be slightly changed by moving the sighting rest or by changing the elevation and windage, and the exercises similarly repeated with the other men in the squad.

Repeat the third sighting exercises, using the peep sight.

FOURTH SIGHTING EXERCISE

This exercise is a demonstration of the effect of canting the piece. The soldier must be impressed with the necessity of keeping the sights vertical when aiming, and not canting the piece to the right or left. Explain to the soldier that if the piece is canted to the right, the bullet will strike to the right and below the point aimed at, even though the rifle be otherwise correctly aimed and the sights correctly set. Similarly, if the piece is canted to the left, the bullet will strike to the left and low. This can be explained by showing that the elevation fixes the height of the point where the bullet will hit the target, and that the windage fixes the point to the right or left; i.e., the elevation gives vertical effects and the windage horizontal effects. Let a pencil (or rod) held vertical represent the elevation; now if the pencil is turned to the right 90, or horizontal, all of the elevation has been taken off, causing the shot to strike low and changed into windage causing the shot to strike to the right.

This effect may be demonstrated as follows: Use the sighting rest with the rifle firmly held in the notches, the bolt removed. Paste a black paster near the center of the bottom line of the target. Sight the rifle on this mark, using about 2,000 yards elevation, then, being careful not to move the rifle, look through the bore and direct the marker to move the disk until the bull's-eye is in the center of the field of view and command "Mark." Next turn the rest with the rifle on its side, and with the same elevation sight on the same paster as above, then, being careful not to move the rifle, look through the bore and again direct the marker to move the disk until the bull's-eye is in the center of the field of view and command "Mark." Not considering the fall of the bullet, the first mark represents the point struck with the sight vertical, the second mark represents the point struck, low and to the right, using the same elevation and the same point of aim when the piece is canted 90° to the right.

POSITION AND AIMING DRILLS

Purpose.—These drills are intended to so educate the muscles of the arm and body that the piece, during the act of aiming, shall be held without restraint, and during the operation of firing shall not be deflected from the target by any convulsive or improper movement of the trigger or of the body, arms, or hands. They also establish between the hand and eye prompt and intimate connection as will insure that the finger shall act upon the trigger, giving the final pressure at the exact moment when the top of the front sight is seen to be directed upon the mark.

The fact though simple, cannot be too strongly impressed upon the recruit that if, at the moment of dis-

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charge, the piece is properly supported and correctly aimed, the mark will surely be hit. Since any intelligent man can be taught to aim correctly and hold the sights aligned upon the mark with a fair amount of steadiness, it follows that bad shooting must necessarily arise from causes other than bad aiming. The chief of these causes is known to be the deflection given to the rifle when it is discharged, due to the fact that the soldier, at the moment of firing, instead of squeezing the trigger, jerks it. This convulsive action is largely due to lack of familiarity with the methods of firing and to a contrained position of the muscles of the body, arm, and hands, which constrained position it is the purpose of the position and aiming drills to correct.

To become a good shot, constant, careful, and patient practice is required. Systematic aiming and squeezing the trigger will do much to make a rifleman. The men will be taught to take advantage of every opportunity for practicing aiming, and squeezing the trigger. For this purpose the barracks and ground in the vicinity of the barracks should be furnished with aiming targets, which the men will be encouraged to use at odd moments, as when waiting for a formation or during a rest. At drill the soldier will be cautioned never to squeeze the trigger without selecting an object and taking careful aim. When on the range waiting for his turn to fire, the soldier should use part of his time in position and aiming exercises, aiming at the target or at objects outside of the range, and he should be made to understand that this practice previous to firing will tend to prevent nervousness and will have a marked effect upon his score.

To Whom Given.—The position and aiming drills will be given to all soldiers who have not qualified as "marksman" or better in the preceding target year. Some practice in these drills (especially in the trigger squeeze exercise) is recommended for those who have qualified as "marksman" or better. The amount to be given is left to the discretion of the company commander.

Drills: General Instructions.—These drills are divided into four progressive exercises. The first exercise teaches the position; the second exercise teaches the position and the aim; the third exercise teaches the aim and the manner of squeezing the trigger; the fourth exercise teaches the methods of rapid fire. These exercises should be taught by the numbers at first; when fully understood, without numbers.

To correct any tendency to cant the piece, the rear sight will be raised. A black paster at which to aim will be placed on the wall opposite each man. The squad being formed in single rank with an interval of one yard between files, the instructor directs the men to take the position of "Ready," except that the position of the feet will be such as to insure the greatest firmness and steadiness of the body. The instructor then cautions: "Position and aiming drill."

The exercise which is being taught should be repeated frequently and made continuous. The instructor prefaces the preparatory command by "Continue the motion," or "At will," and gives the command "Halt," at the conclusion of the exercise, when the soldier will return to the position of "Ready," Or the soldier may be made to repeat the first and second motions by the command "One," "Two," the exercise concluding with the command "Halt."

Care should be taken by the instructor not to make the position and aiming drills tedious. Thirty minutes daily should be spent in this practice

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during the period of preliminary instruction. After gallery practice is taken up, however, five or ten minutes daily should be sufficient for these exercises.

In order that the instructor may readily detect and correct errors, the squads for these drills should not consist of more than eight men.

The instructor should avoid holding the squad in tiresome positions while making explanations or correcting errors.

POSITION EXERCISE

The instructor commands: 1. Position. 2. Exercise. At the last command, without moving the body or eyes, raise the rifle smartly to the front of the right shoulder to the full extent of the left arm, elbow inclined downward, the barrel nearly horizontal, muzzle slightly depressed, heel of the butt on a line with the top of the shoulder.

(Two)—Bring the piece smartly against the hollow of the shoulder, without permitting the shoulder to give way, and press the rifle against it, mainly with the right hand, only slightly with the left, the forefinger of the right hand resting lightly against the trigger, the rifle inclined neither to the right nor left.

(Three)—Resume the position of "Ready."

Remarks.—The instructor should especially notice the position of each soldier in this exercise, endeavoring to give each man an easy and natural position. He should see that the men avoid drawing in the stomach, raising the breast, or bending the small of the back.

The butt of the piece must be pressed firmly, but not too tightly, into the hollow of the shoulder and not against the muscles of the upper arm. If held too tightly, the pulsations of the body will be communicated to the piece; if too loosely, the recoil will bruise the shoulder. If only the heel or toe touches the hollow of the shoulder, the recoil may throw the muzzle down or up, affecting the position of the hit. While both arms are used to press the piece to the shoulder, the left arm should be used to direct the piece and the right forefinger must be left free to squeeze the trigger.

The instructor will first direct the sights to be adjusted for the lowest elevation and subsequently for the different longer ranges.

The instructor commands: 1. Aiming. 2. Exercise.

At the last command execute the first and second motion of the position exercise.

(Two) Bend the head a little to the right, the cheek resting against the stock, the left eye closed, the right eye looking through the notch of the rear sight at a point slightly below the mark.

(Three) Draw a moderately long breath, let a portion of it escape, then, with the lungs in a state of rest, slowly raise the rifle with the left hand, being careful not to incline the sight to either side, until the line of sight is directly on the mark; hold the rifle steadily directed on the mark for a moment; then, without command and just before the power to hold the rifle steadily is lost, drop the rifle to the position of "Ready" and resume the breathing

Remarks.—Some riflemen prefer to extend the left arm. Such a position gives greater control over the rifle when firing in a strong wind or at a moving object. It also possesses advantages when a rapid as well as accurate delivery of fire is desired. Whatever the position, whether standing, kneeling, sitting, or prone, the piece should rest on the palm of the

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left hand, never on the tips of the fingers, and should be firmly grasped by all the fingers and the thumb.

The eye may be brought to the line of sight either by lowering the head or by raising the shoulders; it is best to combine somewhat these methods; the shoulder to be well raised by raising the right elbow and holding it well to the front and at right angles to the body.

If the shoulder is not raised, it will be necessary for the soldier to lower the head to the front in order to bring the eye in to the line of sight. Lowering the head too far to the front brings it near the right hand, which grasps the stock. When the piece is discharged, this hand is carried by the recoil to the rear and, when the head is in this position may strike against the nose or mouth. This often happens in practice, and as a result of this blow often repeated many men become gun-shy; or flinch, or close their eyes at the moment of firing. Much bad shooting, ascribed to other causes, is really due to this fault. Raising the right elbow at right angles to the body elevates the right shoulder, and lifts the piece so that it is no longer necessary to incline the head materially to the front in order to look along the sights.

As the length of the soldier's neck determines greatly the exact method of taking the proper position, the instructor will be careful to see that the position is taken without restraint.

As changes in the elevation of the rear sight will necessitate a corresponding change in the position of the soldier's head when aiming, the exercise should not be held with the sight adjusted for the longer ranges until the men have been practiced with the sights as the latter would generally be employed for offhand firing.

The soldier must be cautioned that while raising the line of sight to the mark he must fix his eyes on the mark and not on the front sight; the latter can then be readily brought into the line joining the rear-sight notch and mark. If this plan be not followed, when firing is held on the range at long distances the mark will generally appear blurred and indistinct. The front sight will always be plainly seen, even though the eye is not directed particularly upon it.

The rifle must be raised slowly without jerk, and its motion stopped gradually. In retaining it directed at the mark, care must be taken not to continue the aim after steadiness is lost; this period will probably be found to be short at first, but will quickly lengthen with practice. No effort should be made to prolong it beyond the time that breathing can be easily restrained. Each soldier will determine for himself the proper time for discontinuing the aim.

The man must be cautioned not to hold the breath too long, as a trembling of the body will result in many cases.

Some riflemen prefer, in aiming, to keep both eyes open, but, unless the habit is fixed, the soldier should be instructed to close the left eye.

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NATIONAL SERVICE

July 1917

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NATIONAL SERVICE

July, 1917

EDITORIALS

TO OUR READERS

IT IS related of a certain English magazine that a temporary gap in the publication was explained with the simple announcement "The Editors are with the Expeditionary Force." We are sure, therefore, that the readers of NATIONAL SERVICE will excuse the few days' delay in receipt of the June and July numbers when they know that *all* the members of our former Editorial and Managing Board have within two months entered the Army of the United States.

Full arrangements have been made, however, to continue publication without interruption; NATIONAL SERVICE will continue during the war and we hope for many years thereafter.

A steadily increasing circulation and the cordial appreciation of our readers will encourage us to maintain the standards established in the initial numbers. We shall continue the policy of emphasizing quality against quantity and shall endeavor to have it universally said of NATIONAL SERVICE that it can be trusted for correct information and authoritative discussion. The ownership and control of the magazine by the considerable number of contributors to the stock will be unchanged and no attempt will be made to make the magazine financially successful at the expense of the highest standards. We bespeak the continued interest and support of our growing number of subscribers.

THE EDITORS.

A WAR OF LABOR

AS TIME goes on the war more and more resolves itself into a vast contest of human labor. That side which can put into the scale the most foot pounds of labor will, in the long pull, win the war. This is true especially whereas the case now is each side has the essential materials with which to wage war and the direction of the war is nearly equal in skill.

By labor we mean ships, food, guns, airplanes, transportation—all the paraphernalia of war, for these things come only from human labor. A man who has had probably greater opportunities to observe the workings of the German machine than any other American

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recently remarked that if America with its 100,000,000 population would organize and apply its labor with 30 per cent. of the efficiency that Germany has used, victory was certain within a reasonable time. By this he meant concrete results in the shape of 10,000 ships (not 1,000), 20,000 guns (not 2,000), 25,000 airplanes (not 2,500), a food supply not simply increased, but doubled.

All these things are within the capacity of the American people and without them there can be no sure road to victory or termination of the war.

Such results can, however, only be accomplished by a willing people understanding the situation and led by leaders of imagination. Indeed imagination is the need of the hour. We must reorient ourselves approaching new and vast problems free of old prejudices and with the conviction that nothing is impossible if it must be done.

A story is told of Lord Kitchener that when in the early days of the war an order for 200 heavy howitzers was presented to him for signature he first added a cipher and then wrote "Approved." Perhaps he would have added two ciphers to-day. Our leaders must add the ciphers. Our business men and organizers must harness the nation's labor to the essential industries and the ciphers will come true.

THE DRAFT AND AFTER

THE first phase of the draft is a success. Arrangements to minimize disorder have been extraordinarily effective but the best preventive of disorder was the essential willingness of the American to be drafted. This does not mean that he was eager for war or that he was necessarily actuated by any burning zeal. It does mean, however, that he has realized that, if we are to do anything effective in a war which we have been unable to escape with honor or safety, it cannot be with the obsolete method of volunteering. We shall look with eagerness to see how exemptions are managed. Any favoritism will be dealt with summarily by public opinion. The General Staff has issued a declaration of policy regarding the promotion of officers which eliminates favoritism and "pull" of every kind. Officers are to be chosen for ability and fitness alone. This is a counsel of perfection, it is true: and we may not expect that it will be fully realized, but such should be the policy of those who deal with the difficult problem of exemptions.

Eliminating all possible conscientious objectors of a genuine kind, providing for those whose manifest usefulness will be in the fields of agriculture, commerce, or transportation, there should still be left three or four million men subject to military duty: and from these, if we still further deduct those whose physical quality is not up to the mark, there should be available at once at the lowest estimate a million men immediately subject to training. Probably there will be double that number. Certainly there will be that many unless old-fashioned and outworn standards of physical fitness are adhered to. A modern army is so well supplied with surgeons, oculists, orthopedists and dentists that many a man can be effective to-day who would have been rejected very properly as late as the Spanish War days; and no man should be rejected unless there is great likelihood that he will prove to be a liability instead of an asset. We shall have as many men to train as our inadequate equipment will be able to train within the next eighteen months at least; and meantime we shall have another

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million or two coming of suitable age. There is no lack of suitable army material. We can raise enough of a force to be perhaps a deciding factor in the Great War. That is our great hope at least.

It is disquieting news that the cantonments will not be ready by September first, but it is hardly surprising, in view of the fact that nothing was done in the months when war was apparent to all but the obstinately blind, to plan for the location of these training centres.

PEACE WITH VICTORY

HALF HEARTEDNESS and expectation of defeat are aid and comfort to the enemy. This is no ordinary war but a war for the establishment of values without which democratic nations must cease to exist. The *New Republic* has recently given expression to this very expectation of our inability to win the war, and our unwillingness to fight it through. We do not wish to impugn the patriotism of so clear headed and useful a journal; but we hope to see a repudiation of the position which many have believed it to take.

It is indeed possible that we and our Allies may be defeated. The righteousness of our cause and the potency of our arms may be insufficient; but the spirit in which this war was undertaken, the spirit which has animated most of those who have been urging that we ought to go in, is the spirit of undying hostility to Hohenzollernism and to Germany just in so far as Germany stands back of that policy.

Undying hostility. If we should be beaten this time and not overwhelmed it would be to begin to arm at once and thoroughly for the next conflict; and the next and the next—until either our foe was defeated or we ourselves were utterly annihilated. Americans will never be the slaves of Prussianism in politics. And our British and French and Italian and Belgian allies have shown what their attitude is. Russia is doubtful.

But America is not doubtful. Slow and confused in action, her power is none the less titanic and the peace she is prepared to offer is a peace which will guarantee the persistence of the democratic principle—and no other.

AN AMERICAN ARMY

WE shall have, very soon, military forces of three different kinds, viz.: The Regular Army, the Militia Forces, and the Draft Army.

Is there to be one army or three? The answer cannot be doubtful. By whatever methods may be necessary, it is plain that there must be fusion of all of these elements into one. We cannot have an elite of regulars: that would be to nourish the militarism against which we protest. We cannot elevate the militia above the drafted men. The draft is not a disgrace, it is simply an intelligent method of obtaining sufficient troops and equalizing the inevitable burden.

And so with the officers. Doubtless the regular, West Point trained man will for some time look down upon the hastily trained officer who has but recently been ignorant of all the principles of military science. But results count. If the training of the regular, officer, or private, has been such as to make him more effective, he will win place, advancement, and honor. And there will be no tin soldiers of any kind in this war. In this fiery furnace men will be tried. In the end we shall have an *American Army* in which every man who has served will be entitled to every consideration due to any other.

Let us have the wisdom to begin

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that way since the end is inevitable—and since there can be neither justice nor reason in any other policy.

All men in this war are regulars and they are all going to be trained alike in the end.

THE FALLACIES OF LIBERTY

THERE is a vast amount of loose and inexact talk to-day about liberty. This talk is not confined to young and immature students of colleges nor to half-educated proletarians. Even many of those who criticize slackers severely are disposed to believe in inalienable rights to liberty, life, and the pursuit of happiness, but in sober fact there are no such rights. The group to which one belongs, in our case the United States of America, can and will, in case of need, take away all these rights which arise only from a loyal adherence to the group, in order that the group itself may survive. We have no personal liberty to do what we will. Anarchists have no "right" to attack the principle of a government which historically and logically demands military service, taxes, and due subordination to law from all citizens and the latter two from all residents of the country. Criticism of government measures should be as free as the exigencies of the particular time permit. That has been an Anglo-Saxon tradition of proved efficacy in the kind of government for whose continuance on earth we are fighting this war, but no criticism of the idea of government, if it arouses dissension, has any claim to be heard. In times of peace we may let the long-haired and passionate assailers of the State rave on. It is less trouble to let them rave than to suppress them: and they don't do much harm.

But in time of national danger they should be suppressed with a firm hand and denied the sweets of publicity. It is sheer absurdity of them to demand the protection of the State in attacks which they make upon the righteousness of having a State: and those sentimental friends of liberty who are aroused to an unthinking enthusiasm at the very word, would do well to consider what they are doing when they defend the right to be heard of those who shriek against all order.

The State taxes all within its borders, it requires jury duty, military service, respect for property, it takes possession of private property by the principle of eminent domain; it suspends the writ of *habeas corpus* in time of war; even in time of peace it arrests, punishes, and sometimes kills those who transgress its laws which represent its will. And all this is done constitutionally.

The anarchist disbelieves in all government. Let him continue so to disbelieve if he will. Belief can never be coerced. A man believes what he believes, no matter what he may be forced to say, but the anarchist should not feel himself aggrieved when people who believe differently suppress him. He has expressly repudiated the right to call upon the law. The law is for believers in it. If we grant the forms of law in time of peace to the anarchist, it is a matter of grace, not of right.

And what is true of anarchists is equally true of the lesser breeds who are rampant, ignorantly, against suppression at a time when their clamor adds to the inevitable inefficiency of democracies in the matter of action.

Freedom of criticism is indeed highly desirable: but it has its limits. Those who believe that the limits are too narrow in any particular instance, must have the courage of their convictions and be ready to suffer for what they conceive to be righteousness. They cannot eat their cake and have it too.

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THE ARMY AND THE CIVILIAN

IN NO other country in the world, perhaps, has the army been more completely separated from the life of the people than in the United States. For the past fifty years we have had no real citizen army. Compared with our population our regular establishment has been so infinitesimal in size as to form hardly any appreciable part of the nation's life. Not only this but it has been kept to a great extent in foreign possessions, on border patrol and in outlying posts, so as to come little in contact with the people as a whole.

This state of affairs has reacted both on the regular army and the people. The army, through no fault of its own, has led a life apart and has developed a tradition and a system having little connection with the development of the national life. It is as if a Chinese wall had been built around this small fraction of the population, which few on either side have tried to scale. The result has been highly unfortunate and now becomes of prime importance, for it is vitally necessary to the creation of effective armies that the army and the civilian shall understand each other and work together with mutual respect.

Our army is now to be a true citizens' army. A year from now nine tenths of the American armies, both officers and men, will be plain citizens drawn from civil pursuits with no natural taste for military life and no previous training in the pursuit of arms. But the upbuilding and the control of these forces will be in the hands of the professional soldier. Will both the army and the civilian stand the test and how shall the necessary readjustments be made? To obtain the best results both the army and the civilian must radically change their points of view. On the side of the civilian he must learn the value and necessity of discipline, respect for authority, the importance of technical knowledge, and the necessity of a certain rigidity of system, subordinating the privileges and identity of the individual, without which large bodies of men cannot be controlled or war successfully conducted. These readjustments will not be easy but they are necessary and will come.

The task of the army is yet more difficult. They must at the outset remember always that they are dealing with a new species when they come to organize and lead these new citizen armies. Fixed ideas of relations between officers and men which have long prevailed in the regular army, practically forbidding relations of social equality between them, must be thrown overboard, and the quicker the better.

These things are of more than superficial importance. It is undeniable that a lack of understanding between the army and the civilian tends now to exist, founded on conditions of long growth, and the points of friction must be smoothed away at the earliest moment. The civilian must respect the technical skill and knowledge of the professional; the army must remember that they are dealing with individual citizens of a democracy jealous of their rights and called to arms only as a matter of duty, however willingly fulfilled.

The ideal state of affairs is that which prevails with the French where the private customarily and naturally refers to his commander as "Mon Capitaine." The French have more true democracy than we but we can at least seek to approach a spirit by which officers and men feel themselves true and equal comrades in the great adventure. Such a spirit will not only make for better feeling but will, in the long run, give us a more effective fighting machine.

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ANNOUNCEMENT *of the* 2D SERIES *of* OFFICERS' TRAINING CAMPS

(We publish this announcement of the second series of Officers' Camps not only because many of our readers will wish to have the exact plan before them, but because it contains a most important announcement of policy. The government in a statement of a "GENERAL PLAN" has, it will be seen, once for all pledged itself to a policy of obtaining officers that will give us a body of officers selected purely on merit.—THE EDITORS.)

I. GENERAL PLAN

TO PROVIDE officers for the drafted forces of the National Army, the War Department has adopted the policy of commissioning all new officers of the line (Infantry, Cavalry, Field and Coast Artillery) purely on the basis of demonstrated ability after three months' observation and training in the Officers' Training Camps. Thus, the appointment of officers of the new armies will be made entirely on merit and free from all personal or other influences.

As an emergency measure to provide officers for the first 500,000 drafted troops the War Department has put in operation sixteen Officers' Training Camps with a total attendance of about 40,000. These sixteen camps correspond to the territorial divisions in which it is planned to raise troops under the Draft Act of May 18, 1917. These camps, which began May 15, 1917, are expected to provide line officers well qualified as to character and training and sufficient for the first increment of 500,000, with a reserve for that increment.

Following the policy of commissioning officers on demonstrated worth, it is intended that, after the first increment of 500,000 has been organized, officers will be obtained by promoting officers and men already in the Regular Army, National Guard, and drafted forces, thus giving to those who have volunteered or have been drafted for military service full opportunity to earn promotion to the exclusion of those not in actual military service.

The period devoted to the organization of the first 500,000 must therefore be devoted to training and selecting officers for the second 500,000 to supplement those promoted from troops in service.

To meet this situation a second series of Officers' Training Camps will be held beginning August 27, 1917, with the definite mission of producing a body of line officers (Infantry, Cavalry, Field and Coast Artillery) capable of filling all places in the grades above lieutenant and many of the places in the grade of lieutenant in the second 500,000 troops.

The training camps to be established for this purpose will afford those not in the military service, or drafted in the future, the last opportunity to become officers. Also, in connection with these camps it is to be noted that mature and experienced men are needed to fill the higher grades (first lieutenant, captain, major, and a few

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lieutenant colonels) in the second 500,000.

2. DATE AND LOCATIONS OF CAMPS

Date (for all camps), August 27 to November 26, 1917.

Locations:

FORT MYER, VA. (2 camps).—For Divisional Area I (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut) and Divisional Area V (New Jersey, Delaware, Maryland, District of Columbia, and Virginia).

FORT MCPHERSON, GA. (2 camps).—For Divisional Area II (Congressional Districts 1 to 26, inclusive, of New York State, being New York City and contiguous territory) and Divisional Area VII (Alabama, Georgia, and Florida).

FORT OGLETHORPE, Ga. (2 camps).—For Divisional Area III (New York Congressional Districts 27 to 43, and Pennsylvania Congressional Districts 10, 11, 14, 15, 16, 21, 25, and 28) and Divisional Area VI (Tennessee, North Carolina, and South Carolina).

FORT BENJAMIN HARRISON, IND. (3 camps).—For Divisional Area IV (Pennsylvania Congressional Districts not included above in Area III), Divisional Area VIII (Ohio and West Virginia), and Divisional Area IX (Indiana and Kentucky).

FORT LOGAN H. ROOTS, ARK. (2 camps), or other place to be designated.—For Divisional Area X (Wisconsin and Michigan) and Divisional Area XII (Mississippi, Louisiana, and Arkansas).

LEON SPRINGS, TEX. (2 camps).—For Divisional Area XI (Illinois) and Divisional Area XV (Texas, Arizona, New Mexico, and Oklahoma).

FORT RILEY, KANS. (2 camps).—Divisional Area XIII (Minnesota, North Dakota, South Dakota, Nebraska, and Iowa) and Divisional Area XIV (Kansas, Missouri, and Colorado).

PRESIDIO OF SAN FRANCISCO, CAL. (1 camp).—For Divisional Area XVI (Utah, Wyoming, Montana, Idaho, Nevada, Oregon, Washington, and California).

3. QUOTAS OF CAMPS BASED ON POPULATION

Each camp will have a quota equaling the population of the divisional area (Census Bureau estimate, 1915) multiplied by .00016. This will give to each divisional area about 1,000 men and will insure an equal basis of representation to each State in the Union according to population.

4. QUALIFICATIONS

(1) Classes eligible to apply. Age limits.

(*a*) Members of the Officers' Reserve Corps (line sections) who, through no fault of their own, were unable to attend the first series of camps; also reserve officers of staff corps under fifty years of age with at least two months' service in war and who have had experience in Infantry, Cavalry, or Artillery.

(*b*) Non-commissioned officers of the Regular Army recommended in March, 1917, for temporary appointment in case of war and who, through no fault of their own, were unable to attend the training schools for Regular Army non-commissioned officers in April, 1917. Maximum age limit, 50 years.

(*c*) Resigned officers of the Regular Army. Maximum age limit, 50 years.

(*d*) Men of proper qualifications made eligible for the Officers' Reserve Corps by the Army Appropriation Act of May 12, 1917. Maximum age limit, 50 years.

(*e*) Men who have qualified for commissions under General Orders, No. 42, War Department, 1915. Maximum age limit, 50 years.

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(*f*) Citizens of the United States who have had war service in the present war as officers or non-commissioned officers of the line in the armies of allied powers. Maximum age limit, 44 years.

(*g*) Men of exceptional qualifications who tendered their services to the Government prior to June 5, 1917, and who have been listed under General Orders, No. 37, War Department, 1916. Maximum age limit, 50 years.

(*h*) Citizens with valuable military experience and adaptability for commissioned grade, or citizens who have demonstrated marked ability and capacity for leadership, and are clearly adapted for military service in commissioned grade. Maximum age limit, 44 years.

NOTE.—Men who applied for the first series of camps must reapply whether or not certified as suitable for the first camps. Right to enter camp, if selected, is not affected by the fact that applicant is drafted before or after camp begins.

The minimum age limit for all applicants is 20 years and 9 months. However, in order to obtain the experienced class of men desired preference will be given to men over 31 years of age other things being equal. Because of the anticipated large number of applications, it will probably be difficult for men under that age to qualify except in instances where the applicant has preëminent qualifications or unusual military experience. This applies to the training camps described herein. For later camps see paragraph 1.

5. MANNER OF APPLICATION AND PROCEDURE FOR SELECTION

All who desire to become candidates will apply on the official application blank.

Men certified as acceptable for the first series of camps (the camps now in operation) but not directed to attend must in all cases renew their applications. Department commanders have been directed to return to prior applicants papers filed with their previous applications.

A member of the National Guard in Federal service may apply through channels and, if accepted, will be part of his State quota. While in the training camp he will be on detached service from his National Guard organization.

It is expected that the entire National Guard will be in Federal service before these training camps open. If the applicant's organization is not in Federal service at time of making application, he must inclose with his application a signed statement of the Adjutant General of the State recommending the applicant as suitable for appointment as an officer and agreeing to discharge him, or furlough him for three months beginning August 27, 1917, if not in Federal service on that date.

The few noncommissioned officers of the Regular Army who were not in position to be included in the training schools established for noncommissioned officers recommended for temporary appointment will, if accepted, be included in the quota of the State in which they are stationed. These men are highly trained instructors scattered through the country on college or recruiting duty.

Employees of the United States must inclose the signed recommendation and consent of their chiefs.

Read the instructions on the application and fill it our carefully. Note particularly that letters of recommendation are not wanted, but only the names of three responsible citizens who know the applicant best. Each applicant must be examined physically at his own expense by a reputable physician, who will fill out the physical report forming part of the official appli-

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cation blank. This preliminary examination is subject to review and the examining officer may require another examination. Men who submitted physical examinations on the Army blank for the first series of camps may submit these reports in lieu of a new examination.

Applications will be received between June 15 and July 15, 1917. Under no circumstances will an application be considered if received after July 15. It will be promptly returned to the applicant.

Shortly after July 15 Army examiners will visit various points, to be an-

AREA	QUOTA	THOSE WHO RESIDE IN—	WILL MAIL THEIR APPLICATIONS TO EXAMINING OFFICER, SECOND TRAINING CAMP—
I	128	Maine	Fort McKinley, Me.
	72	New Hampshire	Fort Constitution, N. H.
	58	Vermont	Fort Ethan Allen, Vt.
	587	Massachusetts	Fort Warren, Mass.
	96	Rhode Island	Fort Adams, R. I.
	196	Connecticut	Do.
II	972	New York (districts 1 to 26, inclusive)	Governors Island, N. Y.
III	714	New York (districts 27 to 47, inclusive)	Fort Porter, N. Y.
	272	Pennsylvania (districts 10, 11, 14, 15, 16, 21, 25, and 28)	130 North Washington Avenue, Scranton, Pa.
IV	998	Pennsylvania (not included in Area III)	1229 Arch Street, Philadelphia, Pa.
V	362	New Jersey	Trenton, N. J.
	35	Delaware	Fort McHenry, Md.
	208	Maryland	Do.
	48	District of Columbia	Do.
	347	Virginia	Fort Monroe, Va.
VI	379	North Carolina	Raleigh, N. C.
	256	South Carolina	Southeast Department, Charleston, S. C.
	361	Tennessee	523½ Broadway, Nashville, Tenn.
VII	448	Georgia	Fort McPherson, Ga.
	368	Alabama	Clark Building, Birmingham, Ala.
	136	Florida	53 West Bay Street, Jacksonville, Fla.
VIII	216	West Virginia	Charleston, W. Va.
	801	Ohio	Columbus Barracks, Ohio.
IX	448	Indiana	Fort Benjamin Harrison, Ind.
	377	Kentucky	640 West Jefferson Street, Louisville, Ky.
X	482	Michigan	Fort Wayne, Detroit, Mich.
	395	Wisconsin	301 Wells Street, Milwaukee, Wis.
XI	971	Illinois	Fort Sheridan, Ill.
XII	304	Mississippi	202½ West Capitol Street, Jackson, Miss.
	272	Arkansas	Fort Logan H. Roots, Ark.
	288	Louisiana	Jackson Barracks, New Orleans, La.
XIII	361	Minnesota	Fort Snelling, Minn.
	355	Iowa	Fort Des Moines, Iowa.
	113	North Dakota	Fort Lincoln, N. Dak.
	109	South Dakota	Sioux Falls, S. Dak.
	200	Nebraska	Fort Crook, Nebr.
XIV	528	Missouri	Jefferson Barracks, St. Louis, Mo.
	288	Kansas	Fort Riley, Kans.
	152	Colorado	Fort Logan, Colo.
XV	688	Texas	Fort Sam Houston, Tex.
	336	Oklahoma	Fort Sill, Okla.
	64	New Mexico	Santa Fe, N. Mex.
	40	Arizona	Whipple Barracks, Ariz.
XVI	72	Montana	Helena, Mont.
	28	Wyoming	Fort D. A. Russell, Wyo.
	64	Idaho	Boise Barracks, Idaho.
	240	Washington	Fort Lawton, Wash.
	130	Oregon	Vancouver Barracks, Wash.
	16	Nevada	Reno, Nev.
	68	Utah	Fort Douglas, Utah.
	457	California	Presidio of San Francisco, Cal.

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nounced, in each State. Applicants selected for personal and physical examination will be notified to appear before the Regular Army examiner in person at a convenient point for inquiry into his record, capacity, leadership, and qualifications in general, also for further physical examination if deemed necessary by the examiner.

After the personal and physical examinations are completed, and as soon after August 1, 1917, as practicable (not later than August 10) the accepted applicants will be notified when and where to go for the training course.

6. OBLIGATION

Accepted applicants, unless they are reserve officers or members of the Regular Army or National Guard in Federal service, will be required to enlist for a period of three months, under Section 54, National Defense Act, and will agree to accept such commission in the Army of the United States as may be tendered by the Secretary of War. The enlistment obligates one to service in the training camp only.

7. APPOINTMENTS AT CLOSE OF CAMPS. AGE LIMITS FOR COMMISSIONS

Men will be classified and recommended for commissions on the basis of their qualifications as demonstrated during the training. Those eligible under the Officers' Reserve Corps age limits (up to 32 for second lieutenant, 36 for first lieutenant, 40 for captain, and 45 for major), will be commissioned for five years in the Reserve Corps. However, these age limits will not govern all appointments because under the Draft Act of May 18, 1917, these age limits do not apply to appointment for the war only. Accordingly, men qualified for commissions (except for the Reserve Corps age limits) will be commissioned in the National Army for the war. In other words, a man of 40 may be commissioned a second lieutenant in this manner if recommended for that grade.

8. PAY AND EXPENSES

The Government will pay the men in training $100 per month during the three months' course and will provide transportation, uniforms, and subsistence, except that Reserve Officers in training will receive the pay of their grades and will provide uniforms and subsistence at their own expense.

All accepted applicants are urged, however, to provide their own uniforms in advance as follows:

1 hat, service.
1 coat, service, olive drab.
2 shirts, flannel, olive drab.
2 breeches, service, olive drab.
1 pair leggins, canvas.
1 pair shoes, marching.

The Government will provide all necessary arms and equipment, and the necessary drill regulations and other publications used in the course will be issued to accepted applicants in the camps.

9. COURSE OF INSTRUCTION

The training will cover a period of three months. For the first month the course will be uniform for all, with the purpose of giving instruction in the duties common to all arms. At the end of a month the men will be divided, according to qualifications and needs of the service, into Infantry, Cavalry, Field and Coast Artillery for special instruction in their respective branches during the last two months. Candidates for Cavalry commissions will be equipped and trained dismounted for service as Infantry.

10. CHARACTER OF MEN DESIRED

Since the special object of these camps is to train a body of men fitted

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to fill the more responsible positions of command in the new armies, every effort will be made to select men of exceptional character and proved ability in their various occupations. While it is desired to give full opportunity for all eligible citizens to apply, no man need make application whose record is not in all respects above reproach and who does not possess the fundamental characteristics necessary to inspire respect and confidence.

BY ORDER OF THE SECRETARY OF WAR:

H. P. McCAIN,
The Adjutant General.

The GREAT WAR

A REVIEW OF THE MILITARY OPERATIONS FROM MAY 10 TO JUNE 10, 1917

By CAPT. STUART C. GODFREY
(*Corps of Engineers, U. S. Army*)

I. THE MILITARY SITUATION

THE past month has brought to the United States a clearer realization of the vast task she has undertaken in entering this war. There has been something of disillusionment. The comfortable belief that England and France could be depended upon to finish Germany in a year, that the Allies would welcome our money and supplies, but would hardly need our *men*—has been pretty thoroughly demolished. We have seen both the Scarpe and the Ailette offensives (to label them by the prominent river valleys involved) checked and then halted by the powerful counter-attacks of German reserves, and we have realized perforce that German military strength was unbroken. Despite the fact that the Central Powers have now for a long period failed to initiate any considerable offensive, their position is now regarded as stronger than for many months past. It has been demonstrated anew how costly must be any effort to push back their lines. A keener appreciation of Germany's economic position, well nigh self-supporting as she is, has been brought home by the increased shipping losses of the Allies and the threat to England therein. Finally, Russia has continued to present a dubious riddle. Whatever the final gain for democracy, it is evident that the cohesion and discipline of the Russian armies has been at least temporarily destroyed. Many German units, in consequence, have been transferred from the eastern to the western front, where they have helped to check Allied progress.

The Cost in Men. From the military standpoint, it has been one of the bloodiest and most hard-fought months of the war. This is hardly evident from the gains that either side can point to. But the halt in their advance did not indicate any let-up in the Allies' efforts; rather it meant that the Germans, having thrown in all available reserves, were pressing to neutralize the successes won by the Allies. The cost to both sides is read in the

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enormous casualty lists. "Never in human history," comments Mr. Simonds, "has there been anything comparable in magnitude or in intensity with the fighting which is now going on. A greater army than that which Napoleon took to Moscow, measured numerically, has been put out of the conflict in the first month of the western offensive. Not less than 600,000 casualties measure the cost of a month of the battles of Arras and the Aisne. Compare with this 160,000 men who fought for three days on the battlefield of Gettysburg, with a casualty cost of 45,000.

An echo of these losses is also heard in the relief of General Nivelle from the supreme French command; the heavy cost his offensive involved, it appears, was not deemed to have been justified by the measure of success attained. In spite of their considerable gains in territory and prisoners (their 30,000 of the latter exceeded the British toll by 50 per cent.), the French were dissatisfied with the result achieved by Nivelle's policy of hard hitting. The hopes raised by his success at Verdun were disappointed, and the nation turned with acclaim to the tested Petain, in whose more conservative policy much confidence was felt. General Petain was given the supreme command of the French forces on May 15th.

Italy Tries and Fails. Two new offensives have been initiated by the Allies this month. The first was on the Austro-Italian frontier. In the present Russian crisis, the threat to Italy of a separate peace between Russia and the Central Powers was particularly ominous. Much depends, then, upon the outcome of this present campaign which General Cadorna initiated with so much energy. Italy put forth her maximum efforts (aided by Great Britain in her heavy artillery) and the result was comparable in intensity with the fighting in France. But after a well-sustained offensive of great striking power lasting almost three weeks, which had secured a considerable success, the Austrians were able to bring against the Italians fresh troops from the eastern front, and to inflict a defeat which at this writing appears to nullify the Italian gains.

Ypres Again. The latest move has been made by the British, who, near the close of the month, struck a fresh blow near the old battlefield of Ypres. The particular respect in which this action has earned superlatives is in the mine explosions which preceded it. Full a million pounds of high-explosive were fired in the charges, the detonation of which fairly blasted off the summits of Messines Ridge. This devastation, added to that of the usual bombardment, had an unparalleled effect. Besides the improved position of the British forces that resulted from this engagement, the moral effect of such a sudden over-powering blow has been enormous. It showed how far-reaching was the English offensive plan. Checked at one point, they could strike nevertheless at another. Theirs is the hammering warfare of attrition. If the English can continue to deal such strokes, German morale will inevitably be shaken.

And so the close of the month brings no little encouragement to the Allied cause, in spite of the serious nature of the problems presented. The new Ally, too, has been at least prompt with financial assistance; and, not unmindful of the experience of other nations, is striving with earnest spirit to make over her tiny military establishment into an adequate fighting force.

II. ON THE SCARPE

The First Check at Fresnoy. We have seen how, last month, the British offensive initiated at Arras suffered its

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first serious check at Fresnoy. For a month they had made headway, first by rapid strides, then by inches. For the Germans had thrown into the breach those reserves which, it is generally supposed, had been assembled for an offensive of their own. As the point of the British wedge at Monchy was gradually widened to include Arleux, Gavrelle, Roeux, the German counter-attacks became more determined, more unsparing of ammunition and men. Fresnoy, which formed the northern salient of the British gains, nearest Lens, was attacked by 20,000 fresh troops, supported by gas shells, and was taken on May 8. It still remains in German hands, and has barred further progress in this direction.

British Take Roeux and Bullecourt. Some of the hardest fighting of the campaign was still to come, however. For a while this centred about Roeux, a village on the north bank of the Scarpe, due east of Arras. Here the chemical works, quarries, and cemetery had been converted into a formidable fortress by means of underground passages, concrete covers, and concealed guns. For weeks this was the scene of hot fighting, but finally the British completed its occupation on May 14, after severe house-to-house fighting. Just north of the town is Greenland Hill, up the formidable slopes of which the British have made some progress. Another storm-centre of fighting was farther south at Bullecourt, where the line bends eastward from Croisilles. All through the middle of the month the opposing forces surged back and forth in this vicinity. Capturing the town only to lose it again, the British made good their hold on May 17, but west of the village there remained some 2,000 yards of German trenches which the English could not take, exposed as they were.

Altered Character of Recent Fighting. In this more recent fighting, certain modifications of the usual trench warfare appear to have been developed. In the first place, the German line is not a mere tangle of trenches, but consists of a series of separated strong points, with an irregular and incomplete connection by trenches. The bombardment has to be focussed on these "fortins," instead of sweeping a wide area. Machine guns play a more important part than ever in the German scheme of defense, and are spoken of as being in "nests" or "thickets." Long naval guns have made their appearance in the German artillery, the tendency being apparently toward guns of greater ranges. Finally, this fighting has been characterized by the lavish employment of gas. M. André Tudesq writes: "The mask is here as precious as the grenade and the rifle. As in a frightful carnival in the manner of Edgar Allan Poe, one could see in the night on the slopes west of Fresnoy entire regiments in masks fighting and killing one another in the midst of black vapors."

The Result. After May 20, there succeeded a comparative quiet on the Scarpe front. There has been little of note since. Rather there has been an increased activity to the north, on the thirty-mile front from Lens to Ypres. The first chapter in the British offensive of 1917 is ended. It won from the Germans their first and second intrenched systems. It drew them from other fronts and other purposes. It won in prisoners over 20,000 men; while the most recent estimates (from Paris) as to losses place the total German losses (in both French and English offensives) at over 200,000, about one seventh of the forces actively engaged. Like Verdun, however, Arras must be reckoned with the offensives that have led to a final

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immobility, and not a sweeping decision.

III. ALONG THE CHEMIN-DES-DAMES

The French Improve Their Position. The story of the French offensive is similar to that of the English, one of gradual slackening. A month ago, after three weeks of fighting, the French had won a position on the southern edge of the Craonne Plateau, following in a general way the Chemin-des-Dames. Briefly, during May they have been able to improve their position, and to reach at several points the northern edge of this plateau commanding the Ailette River valley. Their nearest point of approach to Laon is some eight miles distant, about the same as that which separates the British from Douai. The fighting has not been confined to any one locality, but attack and counter have raged all the way from Laffaux to Chevreux. For days at a time the French have remained entirely on the defensive, but on the whole their lines have crept forward slowly but appreciably. The Germans, who now occupy a declivity with the Ailette at their backs, have distinctly the worst of the position. Toward the end of the month their counter-attacks became particularly sharp and frequent. On the nights of June 3 and 4 they succeeded in gaining French advanced positions northwest of Braye and at Froidmont; their efforts against the important town of Craonne, at the east end of the ridge, have been unavailing.

East of Craonne the French line turns south to cross the Aisne River toward Rheims. All attempts to drive a wedge up this valley into the German lines have been thwarted by the resistance of Fort Brimont. The latter fort is a part of the strong defensive system of Rheims, on which the Germans have based their line north of the city. The French, it will be remembered, studiously avoided attacking opposite this point, but made their other main effort farther east in Champagne. Their advance in the vicinity of Moronvillers was pressed vigorously once more during the last week in May, and as vigorously opposed by the Germans. A maximum gain of from two to three miles has been recorded in this sector.

German Defensive Methods. The significance of General Petain's appointment has already been discussed. A recent statement from a French officer of high command alleges that the Germans had warning, six weeks in advance, of the intended locality of the French offensive, and attributes the French failure to gain more ground to this knowledge. As to the German estimate of these operations, the following quotation from the Frankfurter *Zeitung* is significant:

"Hindenburg is conducting the defensive war according to a new method. One can—at any rate in the fighting area of the French—call this a semi-rigid method. It seems, as far as can be judged hitherto and from a distance, to consist in a combination of the experiences of the war of position with the doctrines of the war of movement. Deep systems of trenches are most carefully constructed, and the defense in the trenches is mobile. The front trenches, which are exposed to the bombardment, are most lightly manned; there is an elastic bending back; infantry attacks are received in skillfully constructed cross-positions; and powerful counter-strokes are made at the right time and in the right place. The successful result is that the loss of ground is slight, the casualties are diminished, and the attacks are defeated in an unusually brief infantry fight."

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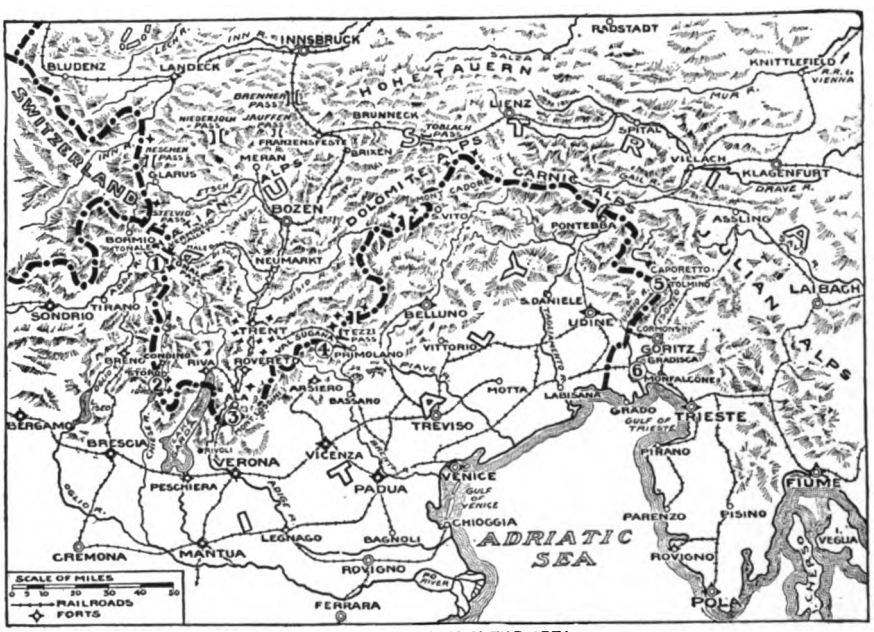
IV. THE ITALIAN OFFENSIVE

In the two years since Italy entered the conflict, her efforts have for the most part been concentrated upon her announced goals across the Isonzo and in the Trentino. Her attainments have not been impressive; although in reckoning them, the difficult character of this rugged country must be considered. In any event, the Italians have at no point penetrated more than ten miles into enemy country; Gorizia has been the sole city of considerable size that they have taken; while their western frontier was found to be so inadequately secured that the Austrians in their 1916 drive on Vicenza almost won a crushing victory.

The Theatre of Operations. In working toward her chief immediate objective, Trieste, Italy's strategy must be simple. Her generals have little choice except to blast away at the difficult positions which lie before them. Only a narrow shelf of land lies along the coast, commanded by the port of Duino. Behind this city rise abruptly the precipitous heights of the Carso Plateau, stretching north toward Gorizia, and constituting a barrier the Italians can hardly go around. Beyond Gorizia, in the Plava sector, are other heights, not important in themselves, perhaps, but which extend and secure the flank of the Italian lines on the Carso. It was a part of the Italian plan not to disclose the main objective of the offensive at first. For ten days the fighting was largely in the Plava district, north of Gorizia. Between this city and Tomino, some twenty miles to the north, the Austrians had retained a strong ridge of hills, parallel to and commanding the Isonzo. The Italian artillery opened upon these positions on May 12, and kept up its



THE ITALIAN-AUSTRIAN WAR AREA

The heavy fighting of the past month occurred on the Isonzo River, and in the Julian Alps, from Tolmino (numbered 5 on the map) to near the Gulf of Trieste. From the *Review of Reviews*

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bombardment, answered by the Austrian guns, until the 14th. The infantry then advanced, crossing the wide Isonzo, itself no mean obstacle, by means of pontoon boats, against these hill positions.

The Opening Attack in the Plava District. Three miles north of Gorizia lies Monte Santo, and beyond are Monte Vodice and Monte Cucco. These three hills, some 2,000 to 2,500

DETAIL MAP OF ITALIAN OFFENSIVE
(Showing the Austro-Italian lines on June 1. From the *Scientific American*)

feet high, formed the pillars of the Austrian defensive line. Against Monte Cucco the opening attack was directed, and the Italians were soon in control of its summit. Monte Vodice, where the fighting centred on May 18, presented a more serious problem; here the Austrian countermeasures were particularly vigorous, and their rocky shelters, supplied with machine guns, very formidable. The terrain here has been likened in character to the Devil's Den, at Gettysburg—but modern fortifications and modern artillery destroy the comparison as to battle conditions. The Italians captured here several large guns, together with machine guns and ammunition. In like manner Monte Santo was in turn attacked, and Italian gains were recorded. About this time came the news of an Austrian diversion in the Trentino, at separated points in the Adige and Sugana valleys. The defensive positions elaborately constructed by the Italians on the frontier now stood them in good stead, and this attempt to discourage Cadorna's offensive made little headway.

The Main Effort on the Carso. After ten days of fighting in this sector, the Italian attack suddenly shifted to the Carso (May 24). On the thirteen-mile front from Castagnevizza to the sea they struck unexpectedly and hard, penetrating the hostile lines to the depth of a mile. This attack succeeded an artillery bombardment of 10 hours, and won 9,000 prisoners and the village of Jamiano. Here for the next week the attacking troops kept up the pressure, creeping along the coast close to Duino, a small port that lies a dozen miles west of Trieste. The narrow coast belt here affords little opportunity to operate against this town, while close behind it rise the protecting heights of Monte Querceto. This hill position, it would seem, must be turned before the little port could be taken, though the Italians were only a mile from the latter place, at San Giovanni. Their line to the north ran close to Medeazza, and touched the western edge of Castagnevizza, which they had failed to capture.

Austrians Assume the Offensive. For nearly three weeks the Italians had sustained their offensive with extraordinary tenacity, alternating to some extent between the Plava and the Carso district. During this period the Austrians had had time to receive reinforcements from the Russian front, and now they were ready to make a

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strong offensive return. After a three days' bombardment, on the night of June 3, their forces attacked all along the line from San Marco to the coast. After several slight successes, their crowning achievement was reported on June 5; south of Jamiano, they recaptured a line of trenches previously occupied by the Italians, and with it 6,500 prisoners. Their advance at this point threatened the Italian right flank at Giovanni, and precipitated heavy infantry and artillery combats. On the 6th, the total captures for three days were announced as over 10,000 men, including the effectives of three regiments, and a field hospital.

This latest development puts an entirely different face upon the early aspect of things in this sector. While the Italians retain most of the ground gained, the significant fact is that their advance toward Trieste has been halted. The prisoners they have taken, some 25,000, are just about balanced, if the Austrian reports be true, by those lost to the latter. The Italian misfortunes appear to have been due to the heavy hostile reinforcements. Their own early efforts were most creditable; the reported losses of entire regiments are not yet adequately explained. A praiseworthy factor in the Italian operations is their excellent system of communication and supply. General Maglietta, Cardona's chief engineer, aided by 200,000 workmen, is reported to have covered the entire front with a network of fine roads.

V. MESSINES RIDGE

The Battle Ground. Unlike its predecessor at Arras, the latest British stroke did not enjoy the advantage of surprise as to its objective. For some two weeks, since the slackening of the fighting on the Scarpe, British activity had been working farther north, as if to seek ground less difficult for an advance. Around Ypres the entrenched lines form a salient the narrow sides of which are drawn close to the city. On the south, particularly, the Germans have held for over two years the commanding ground that has made the British position a precarious one. This culminates in the ridge extending from Wytschaete to Messines, a ridge whose height of 70

THE BATTLE OF MESSINES RIDGE
(Showing, by the dotted line, the British gain on June 7)

meters makes it a landmark in that low country.

The Battle. This was the point of attack chosen by the British, and the result is thus described in their report:

"At 3:10 A. M. (June 7), nineteen deep mines were exploded simultaneously beneath the enemy's defenses, by which large portions of both his front and support trenches, including extensive dugout and mining systems,

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were completely wrecked. Immediately upon the explosion of the mines our guns opened and our infantry assault was launched.

"Within a few minutes the enemy's first line system was carried on the whole front attacked. Our troops then pressed on, with scarcely a pause, to the western slopes of the Messines-Wytschaete ridge, and three hours after the commencement of the attack had stormed the entire crest from south to north.

"Shortly afterward the whole of Messines was captured, and before midday the capture of Wytschaete village also had been completed after hard fighting.

"In the second stage of the attack our troops pushed down the eastern slopes of the ridge and advanced against a powerful line of German rear defenses. By nightfall practically the whole of this trench system was also in our hands and we had gained the whole day's objectives. (A total gain of from one to two miles over a seven-mile front.)

"Following on the great care and thoroughness in preparation made under the orders of General Sir Herbert Plummer, the complete success gained may be ascribed chiefly to the destruction caused by our mines, to the violence and accuracy of our bombardment, to the very fine work of the Royal Flying Corps and to the incomparable dash and courage of the infantry. Excellent work was done by the tanks.

"Over 6,400 prisoners, including 132 officers, have already passed through the collecting stations as a result of yesterday's operations. More than twenty guns thus far have been collected."

In many ways, this remarkable action seems to have been typical of modern battle conditions. It was admirably planned and coördinated, and preceded by thorough preparations, the mines having probably taken months to prepare (their detonation was said to have been heard across the English Channel). The movements of the British troops within their own lines, under full moonlight, was concealed by an elaborate barrage of smoke.

The Germans, though apparently stunned for a time by the sheer weight of the blow, were quick to recover. During the next day or two their counter-attacks drove fiercely against the heights which were now occupied by British artillery. Their efforts did not succeed in regaining the lost ground, but they checked the English, at least temporarily, in their progress.

The Result. Summing it up, it appears that the British have improved the Ypres position by removing a threat, wiped out an old score (the Messines Ridge was taken from them by the Germans in October, 1914), and achieved a considerable moral effect. Doubtless the assaulting troops of General Plummer's army are much exhausted, as are the Bavarians who withstood the assault. But it is only by such blows as this that the Germans can be made to feel that they are outmatched.

VI. OTHER FRONTS

Russian Military Weakness. It has been a lean month in Russia, in a military sense. Early in May the demoralization of the army became acute, as a result of the Socialist peace agitation, and the undermining of discipline due to the soldiers' councils which had been generally established. Soldiers fraternized openly with the Germans. Many officers resigned their commissions, in despair of maintaining discipline under such conditions. The

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weakness of the military forces was so apparent that the Germans could with perfect security despatch many of their units from this front to France.

As May wore on, an improvement in these conditions was evident, as a result of the heroic efforts made in this direction. A new coalition cabinet was formed, which displayed elements of strength, particularly in its War Minister, Kerensky. Generals who had resigned, like Brusiloff and Gurko, were persuaded to retain their posts. The sporadic Russian attacks, at scattered points, which had been too insignificant to merit attention, became more consistent and frequent, as if the Russians were endeavoring to hold the Germans facing them on this line. Still, no offensive developed of a nature to keep the Germans fairly occupied. General Alexieff, who resigned the chief command of the armies on June 5, was succeeded by General Brusiloff.

In any event, the German offensive of which the Russians appeared so apprehensive, has not developed. Whether the Russians can thank the French and English for calling off the German troops intended for this purpose, or whether Germany deems the advantages of a prospective peace greater than those promised by a successful offensive, is a matter for conjecture.

Macedonia. Little has come from the activity on the Macedonian front, which, early in May, was heralded as marking the beginning of a real offensive on Sarrail's part. It is apparent, rather, that the purpose of these operations has been to keep the hostile troops on this front occupied, and to put additional burdens on the Bulgars, long weary of the war. The reported presence of Prussian Guard units on this front indicated that the movements to some extent achieved their purpose. During the latter part of May the activity in this sector died down almost entirely.

Mesopotamia. From the Far East almost no activity is reported. General Maude's advance appears to have halted near Samarra, while the Russians have apparently failed to give any appreciable assistance. One Russian force, fighting its way across the upper Diala on May 10 in a tardy attempt to strike the Turkish rear, was forced back across the river four days later. A Turkish force, of something like 20,000, has been driven by the British into the Jebel Hamrin Hills.

VII. VARIOUS NAVAL OPERATIONS

A Battle in Three Elements. A unique battle which took place in the Strait of Otranto, east of Italy, on May 15, is thus described: "Five nations participated in it, and the fighting was carried on in the air, on the sea, and under water simultaneously. A squadron of Austrian and German cruisers and destroyers made a night attack upon the chain of Italian, British, and French patrol vessels blocking the Strait. Fourteen British drifters and several Italian vessels were sunk, yielding 72 prisoners. British and Italian cruisers hurried to the spot and pursued the enemy all the way back to Cattaro. The British cruiser *Dartmouth* kept in contact with three enemy ships for more than two hours at high speed, firing about 600 shots, but was struck by a torpedo from a U-boat and lost several men. The Italian seaplanes hovered over the enemy vessels in their flight, dropping bombs."

The Submarine Situation. The reports of losses to British shipping from the submarine campaign, after reaching alarming figures, have shown a gratifying decline toward the end of the month. The United States vessels

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now in British waters (since May 4) have received some credit for this result, as is evident from the following quotation from the *Army & Navy Journal:*

"It seems very certain that the marked decrease in the effectiveness of German submarine warfare in British waters shown recently is due to the help afforded by the United States destroyer flotilla. The addition of the United States flotilla permits a greater area of seas to be policed and lessens, accordingly, the opportunities of the submarines to carry on their destructive work. The Associated Press correspondent at London reports an official of the British Admiralty as saying: 'The American destroyers are playing no small part in the anti-submarine war, and our officers have expressed the greatest enthusiasm at the spirit, enterprise, acumen, and quick wittedness with which the American unit has taken up its work. The Americans are already thoroughly conversant with our methods, and we hope that they soon will begin teaching us some new angles.'"

The losses to British transports during the month have been unusually heavy. No less than three large transports have been torpedoed in the Mediterranean, the *Transylvania, Arcadia*, and *Cameronia*, with an aggregate tonnage of 34,000 tons, and a total loss among the troops of 800 officers and men. Several hospital ships have also been sunk during the month. Naval and airplane raids have been reported, but none of particular note.

VIII. SUMMARY

Battle follows battle, and each in its turn seems to be more intense, more deadly than its predecessor. Italy has tried, but has so far failed. England is able, when she is stopped at one place, to go on at another. The war stretches out toward a fourth year, with little prospect of a military decision.

The Allies Stand Together. Yet there is much of encouragement to be read in the month's developments. It is significant, after all, that the Central Powers are *nowhere on the offensive.* Austria is very weak, and desirous of peace. Bulgaria and Turkey are half hearted in their support. "The war has begun to go against Germany," said President Wilson in his message to Russia. And it is hopeful that our entry into the war is already helping toward this desired consummation; and especially that the Allies are striving to work together in unity. This is evident in all the military operations, even in Russia's sporadic attempts to assume the offensive. "If the forces of autocracy can divide us they will overcome us," wrote Mr. Wilson; "if we stand together, victory is certain . . . but we cannot afford then or now to be weak."

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TRENCH WARFARE

AN ILLUSTRATED TECHNICAL ARTICLE DEALING WITH TRENCH CONSTRUCTION AND MODERN ENGINEERING DEVELOPMENTS IN THE PRESENT WAR.

By LIEUT. COLONEL HENRY JERVEY

GENERAL BERNHARDI is said to have written: "As for us we shall certainly not defend ourselves behind slopes and trenches. May the genius of the Germans save us from that."

Turenne remarked: "Les Français ne sont pas bons pour les levées de terres."

The Germans have been forced to fight precisely in a manner that they wished at any cost to avoid.

The French have had to accept "la guerre de taupes" (the war of moles) and to adapt themselves to live and fight behind earthen dikes and trench walls.

American soldiers at the beginning of the Civil War were much more eager to march and manœuvre and fight in the open field than to win ground inch by inch by digging lines of rifle pits and trenches where drudgery, obstinate patience and skill in concealment are most demanded until the moment arrives for the supreme effort of the assault. Long before the close of that war, however, troops of both sides would intrench without orders. So in other wars fought with rifled arms and artillery of increasing power and effectiveness, the infantry, by hard experience, have had to learn the tremendous power of the weapons of the enemy and have been driven to use field fortifications to an increasing extent in both defensive and offensive operations.

Colonel Fiebeger notes as remarkable that after the experience in the Russo-Turkish War the Russian armies of 1904-1905 were not more thoroughly impressed with the value of fire action from an entrenched line and that their troops were not more thoroughly trained in both the attack and defense of such lines. The Japanese, on the other hand, fully realized "the value of fire action, cover and concealment, and the various difficulties that would be encountered by the attacking troops."

In the present European war the use of entrenchments has attracted the public attention. We read in the current histories of the war somewhat as follows:

"The striking fact stands out that the old kind of warfare is to be found only on the eastern front. On the west and in the Dardanelles there is the new trench warfare, deadly beyond all belief, but the logical outcome of the trench fighting of Lee's and Grant's armies in 1864–65. It has yet to be demonstrated that either side can overcome this simple device, when coupled with barbed wire entanglements, and break through, save at a cost of human life which no nation can afford to pay."

Some interesting quotations and comment are made by M. Henry de Varigny in "Mines et Tranchées," 1915. He says that the trench was in use twenty centuries ago. Polybius, the Greek historian, relates the following (History, Book I):

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"The two Roman Consuls, L. Postumus and Q. Manlius, having disembarked with the legions in Sicily to defend King Hiero, their ally, resolved to begin the war boldly, by marching against Agrigentum and camping eight stadia from the town.

"The Carthaginiana did not fail to attack, and got as far as the entrenchments, but the Romans repulsed them with great slaughter. For a long time there were only minor combats, and the space that remained between the two camps was fortified in such a manner that there was a long ditch (trench) toward the town to prevent the enemy from making sorties and another beyond the camps to defend them against any that might come. And, moreover, between the ditches and the two armies there were good guardhouses, separated from each other by a short interval.

"From both sides an abundant supply of food and of all necessities was brought in.

"Affairs remained in the same state for about five months, neither party securing any advantage that might raise his hopes; for only minor engagements took place."

And Polybius says again (Book XIII) in regard to the campaign of Hamilcar Barca against Junius:

"The forces of the two sides were equal; the camps well fortified and inaccessible; the interval separating them quite short; whence it happened that they fought every day individual combats but no general battle.

"Every time they came to blows there were losses; as soon as one felt the enemy superior to himself he withdrew into the entrenchments to get cover, then returned to the attack."

Some who have endeavored to trace the historical development of trench warfare or field fortification claim to find its origin in prehistoric times when the man of the Stone Age crept up behind a fold of the ground or through the gullies of a rainwashed slope, hiding behind trees and rocks, to surprise his prey or his enemy and get near enough to make effective use of his simple weapons of flint or bone.

However this may be, we shall be safe in assuming that trench warfare is no new thing. Its present prominence arises from its extraordinary extension on the western front in Europe where the entire line from the North Sea to the Swiss frontier is entrenched, where the attack must necessarily be delivered against the fortification, there being no flanks to turn, and where the employment of every modern instrument of offense has brought about a corresponding development in the methods of utilizing the ground in respect to natural and artificial cover.

Where the opposing lines number millions of men, the resulting magnitude and intricacy of the earthworks is astonishing; the prolonged residence of the troops in the trenches; the construction of deep cover trenches and roadways or passages well below the surface; the still deeper refuges reached by steps or ladders where security from the high explosive shells is hoped for; the many details of attack and defense, of security and observation, of supply and comfort, that the troops have devised; the spectacular use of air craft, shell and shrapnel, hand grenades, gas attacks and liquid fire; all these things have furnished material for the war correspondent and for authors of high and low degree; the combination has proved of irresistible interest and the special name "Trench Warfare" has been invented or at least revived into common use.

We shall, however, expect to find world-old principles at work for fundamentals do not change. Action is equal to reaction in all the activities of man and of nature. Of the defini-

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tions of fortification there are many; two only will be quoted:

(a) From a French authority: "Fortification is the art of organizing a military position so that the force occupying it can resist without too great disadvantage a force superior in number and arms."

(b) From Colonel G. J. Fiebeger: "Fortification is the art of increasing by engineering devices the fighting power of troops that occupy a position."

It must be borne in mind that fortification is in all cases a means to an end—a means by which strategical results are to be obtained, a prelude to the grand performance of powerful aggressive action to destroy the enemy's armed forces and resistance. The fighting power of the troops must not be interfered with when the time comes for them to leave the fortifications and go after the enemy. Colonel Jones in his Memoranda on the Lines of Torres Vedras says, "The artificial defenses of the lines altogether present a most favorable example of the engineer's art in furtherance of, but invariably subservient to, tactics, creating pivots and supports but never a tie or restraint on field movements." The constant effort of the combatants on the west front at present to break through and bring about some action shows that the above principle is thoroughly appreciated by the "high command."

In the location and construction of every defensive work a few simple principles should be observed, as follows:

(a) Provide for the most effective use of the weapons of the defense.

(b) Restrict the effective use of the assailant's weapons.

(c) Afford means for the concentration of superior strength at decisive points.

Every fortification must, therefore, provide:

A sufficient field of fire;

Cover from the enemy's fire;

Concealment from the enemy's view;

Easy communications for the defenders;

Obstacles that will delay the advance of the enemy, interfere with the free use of his weapons, and expose him to the fire of the defenders.

The relative importance of the above elements will vary somewhat according to the state of the art of the attack. Defensive measures will follow the way pointed out by offensive methods and instruments of attack. Thus questions will arise as to whether a wide field of fire is more or less important than concealment of trenches from the enemy's view; whether it is desirable to try to make use of the full range of the infantry rifle or to reduce in width the exposed zone over which the assailant must advance, trusting to the rapidity of magazine fire and the increased accuracy of short range fire to accomplish the work of destroying him. The introduction on the battlefield of long range heavy artillery using high explosive shells, aided by perfected methods of observation and communication from aircraft make concealment of positions and troops and cover for troops during artillery bombardments increasingly difficult and important. The necessity for keeping the front line troops as well as reserves and supports out of the front trenches until the moment of assault, makes it necessary more than ever before to provide deep and ample communications and a system of accurate guiding through them. The shortened field of fire makes a concealed and indestructible obstacle a necessity. The present practice, so far as can be deduced from available information from the battlefields of Europe, will be noted more in

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detail as we proceed. One fact seems to stand out prominently; namely, that the missiles of the heavy mobile artillery, trench mortars, and howitzers are so destructive that a sufficient shield against them is not practicable and cover in the firing trenches has, therefore, been limited to protection against rifle bullets and shrapnel. Material obstacles are reduced to the almost invisible barbed wire net. Thus the prime function of fortification; namely, to facilitate the use of the defender's weapons and restrict those of the enemy, is well illustrated.

It is also clearly shown that the fortification itself is the passive element of the defense and that the mobile army with its firearms is the element absolutely essential for aggressive and decisive action.

EFFECT OF WEAPONS

Improvement in weapons causes modification in both the section and the trace or siting of trenches.

The section is so designed as to protect the defender while at the same time affording him free and effective use of his weapons. With each improvement in the weapons of the attack the defender has improved his trench sections to meet successively the smooth bore musket, the muzzle-loading rifle, the breech loader, and finally the magazine rifle capable of 20 aimed shots per minute. Then came the machine gun, increasing enormously the density of fire and requiring a minimum of space for cover and concealment.

Up to about the middle of the nineteenth century the improvement in firearms was gradual and there were no startling developments in field fortification. Prior to 1840 the infantry was armed with a muzzle-loading smooth bore musket fired by a flint lock. The development of the infantry arm is roughly indicated in the following table adapted from Colonel Fiebeger's textbook on Field Fortification:

PERIOD OR YEAR	CHARACTER OF WEAPON	RATE OF FIRE. SHOTS PER MINUTE	ACCURATE RANGE YARDS
Prior to 1840	Smooth bore, muzzle loader, flint lock	1½	150
1842	Smooth bore, muzzle loader, percussion lock	1½	150
1855	Rifle, muzzle loader, percussion lock	1½	500
1869	Rifle, breech loader	12	1,300
1892	Rifle, magazine, small calibre, smokeless	20	2,000
	Machine gun, smokeless powder	600 to 800	2,000

Artillery has likewise made great strides in increased range, power, and accuracy, as well as rapidity of fire, advancing to the modern breech-loading rifle, firing fixed ammunition up to six-inch calibre, and projectiles variously classed as shell, shrapnel, and high explosive or torpedo shell. Shell fire in the present war has proved particularly effective as a means of destroying morale and personnel and is rated as of more value than shrapnel.

Accurate high angle fire from field howitzers and mortars has been developed and this dangerous form of attack from overhead has caused both infantry and artillery of the defense to seek more perfect concealment. The consequent searching power of artillery brought about the necessity for indirect fire from concealed positions, and indirect fire, in turn, has demanded greater perfection in methods of observing, range finding, and pointing.

In the twentieth century, before the

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great European conflagration, the Boer War and the Russo-Japanese War had already demonstrated the value of deep trenches in protecting infantry from the shell and shrapnel of the field artillery then in common use and had emphasized the value of concealment and the advantages of no parapets or very low parapets to the firing trenches. These ideas found their way into the military textbooks and manuals and the adopted trench sections appear deep enough for a man to fire standing over the low parapet, and as narrow as was deemed consistent with reasonable facility of movement by troops through the trenches. Simple standing trenches are shown with parapets 12 to 18

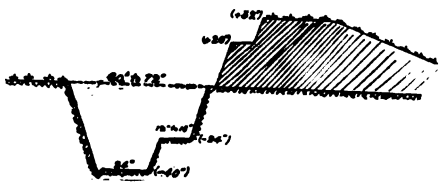

Fig. 1. Strengthened firing trench built in one night in favorable soil. 1912 type

inches high; widths at the top of from 30 to 36 inches, and generally provided with elbow rests about 12 inches wide. Completed or strengthened firing trenches are shown wider and over about half the section they are deepened, so as to provide a sheltered passageway in rear of the men who are stationed to fire over the crest. Sometimes a firing step and a higher parapet are represented as in the case of the Russian trenches at Liaoyang and the Japanese trench at Chinchiatun where the parapet was 30 inches high, the firing step about 24 inches below the ground surface and the rear part of the trench, used for communication, 42 to 48 inches deep. In special cases the parapet may be still higher as in rocky soil, difficult to excavate, or in wet ground where drainage below the surface is impracticable. In other cases the parapet may be entirely suppressed to obtain a maximum of concealment. The narrowest trench

Fig. 2. Firing trench on steep descending slope. 1912 type

section with elbow rest shown in manuals prior to 1914 gives a horizontal exposure to bursting projectiles of about 42 inches, and the wider or completed sections give an exposure measuring from 8 to 12 feet horizontally. The latter feature, namely, the exposure of wide trenches to shell and shrapnel, to which it is desired to call attention, is illustrated in the accompanying sketches of sections, Figs. 1, 2, and 3.

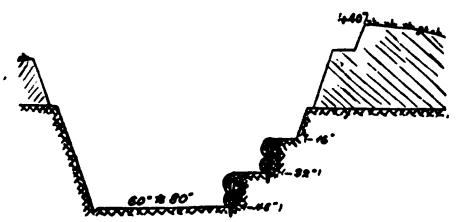

Fig. 3. Widened firing trench. 1912 type

The strengthened firing trench, which is about 24 inches wide in its deepest portion, with banquette, elbow rest and slopes front and rear, allows an exposed opening, subject to shrapnel fire, somewhat more than 6 feet wide. In the widened fire trench this exposed opening is over 12 feet wide. The strengthened type in loose soil exposes nearly 10 feet and on steep descending slopes about 8 feet.

Such sections as we have described

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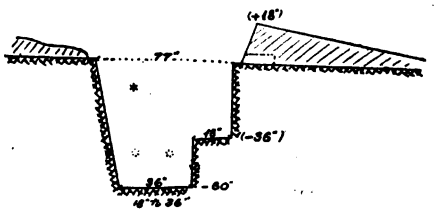
above proved effective as long as they remained intact; and when manned by good infantry, supported by machine guns, they are practically proof against assault. Attacking troops learned this fact by costly assaults and found themselves forced to devise ways and means of destroying the trenches and firing positions before attempting to take them by direct assault. The two agencies that have proved most useful in the present European war in accomplishing this end are aërial reconnaissance and the extraordinary extension of artillery fire, accurate and destructive enough to wash away the enemy's trenches, cut up his wire entanglements, smash his shelters, and



*Small cartridge recess every five feet
**Slight slope toward rear

Fig. 4. Normal full section firing trench. British type, 1915

excavate his machine gun positions and refuges far below the surface of the ground. Besides this work and the customary service of the artillery in combating hostile batteries, all guns, both field and heavy, are called upon to furnish the "tir de barrage" or barrier fire to screen the advancing lines of the attack and to prevent the enemy advancing his supports and reserves in counter-attack. More than ever before, the rôle of artillery as the supporting arm of the infantry and the necessity for the closest coöperation of the two arms are here exemplified.

Captain Thuillier in his most instructive volume on "The Principles of Land Defense," written in 1902, describes very vividly the British assaults on the Boer trenches. He says that it was generally recognized that earthworks could not be materially damaged by direct fire, but it was hoped by an intense and accurate fire of shrapnel to prevent the Boers manning their parapets during an attack until the very last stage. The result of the experiment was disappointing. The Boers endured their bombardment

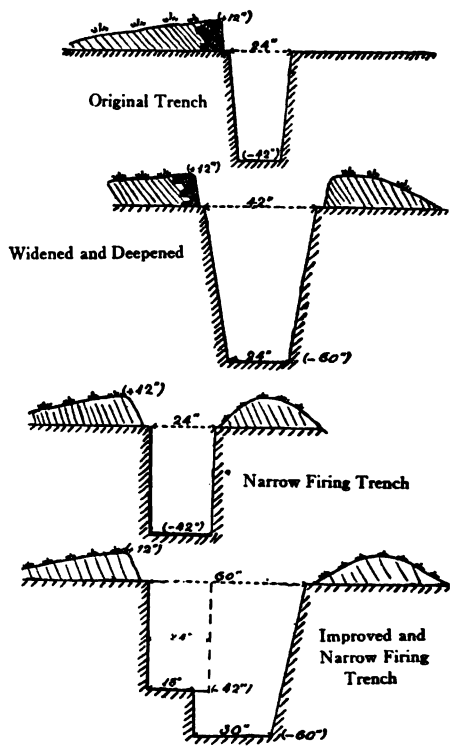


Fig. 5. Typical trench sections

of lyddite shell and shrapnel almost in silence and no position was revealed by answering shots; but as soon as the British infantry advanced to the attack and came within range, an appalling fire with smokeless powder burst from invisible trenches and from positions until then not known to be occupied. The British concluded wisely that frontal attacks of this nature were suicidal and finally reverted to the

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method of trying to get on the defender's flanks. On the western front in Europe to-day, however, there are no flanks to turn. Surprise which was formerly often an element in a successful attack is almost out of the question against a watchful enemy who has had time to organize his position. Therefore, it has come to pass that

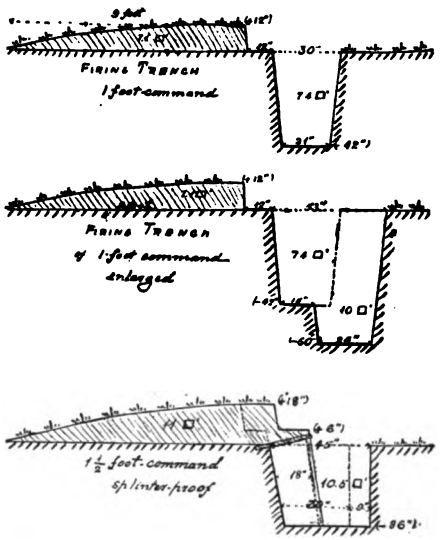

Fig. 6. Types of field trenches, U. S. Army, 1914

former ideas must undergo a change. Earthworks and wire entanglements must be materially and effectually damaged and rendered ineffective and the hostile batteries silenced before infantry can hope to advance.

The builder of entrenchments realizes this fact and makes his dispositions accordingly, knowing that the enemy will make use of every possible means to discover his trenches, shelters, and firing points and to destroy them by an artillery fire of superlative accuracy, with a patient attention to detail never known before.

It must be remembered that on the western front the so-called first line of trenches consists in fact, of two, three, four, or sometimes five lines of trenches running irregularly in a general lateral direction and not always continuous in each line. The depth or distance between the first and last of these lines is sometimes not over 100 yards. These trenches are connected by "boyaux," that is to say approaches or communication trenches and in certain instances

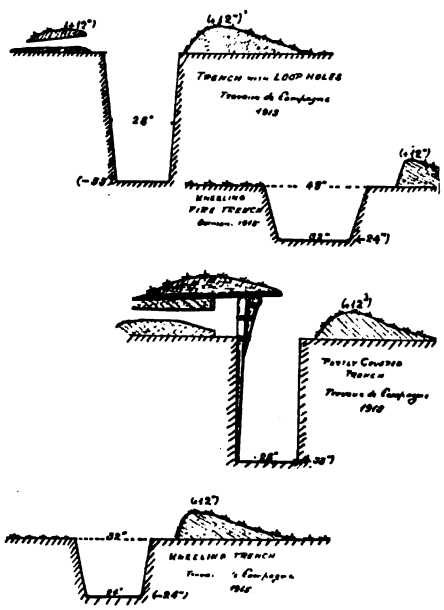

Fig. 7. Types of field trenches on the western front

by underground passages through which troops and supplies can be brought up under cover.

The second position or second line proper is some 3 or 4 kilometers to the rear and generally on the reverse slope of a ridge or hill, concealed from the enemy's view and fire, and communicating with the forward positions by "boyaux" or by natural covered ways like valleys, ravines, stream beds, or sometimes woods.

Prepared lines of the third, fourth, and fifth orders and perhaps more are located at intervals to the rear to be

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occupied in case of forced withdrawal from the front.

Some actual examples of entrenched positions observed are briefly described below, and from them and other sources of information an attempt will be made to draw general conclusions as to the practice of the belligerent nations of Europe at the present time.

Fig. 8. Arrangement of traverses

In steep mountainous regions some 2,000 to 2,500 feet above sea level the trenches follow generally the crest of the ridge on the forward slope just below the summit and are located in dense pine forests free from undergrowth. The firing trenches consist of short detached sections, each for 40 to 80 rifles, and are broken or curved to fit the ground. The ground here is very rocky and full of roots so that it is

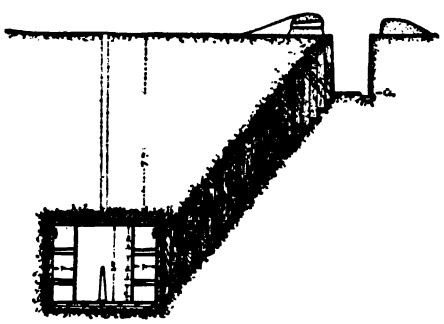

Fig. 9. Cave shelter leading from trench

necessary to give the profile considerable command and the parapet is 3 feet high and the trenches 3 feet deep. Traverses are provided to limit the effect of shells and hand grenades. Splinter-proof shelters, capable of holding 6 or 8 men, are located close in rear of the firing trenches. The shelter for the telephone station is particularly strong, having a roof built of a double

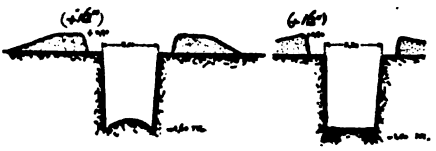

Fig. 10. Communication trenches. Drainage of bottom

layer of 6-inch I beams laid flat with 3 feet of earth on top of them.

Machine guns are installed on the flanks of the trenches in splinter-proof

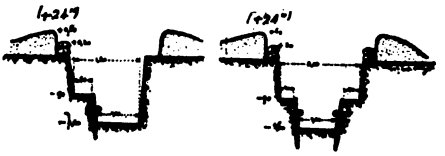

Fig. 11. Communication trenches. Prepared for defense

casemates; the gun is set flat in the embrasure and a room in the rear shelters the crew and ammunition.

There is no overhead cover along the parapet, but abundant head cover

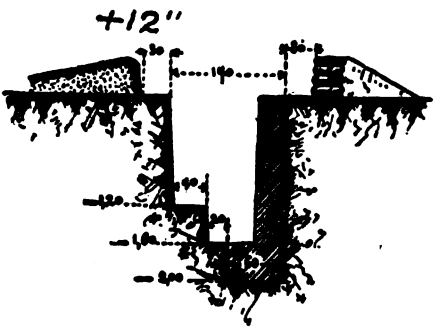

Fig. 12. Firing trench. Widened and deepened (Shaded part shows increased dimensions above normal section)

is furnished by head logs, steel shields $\frac{3}{8}$ inch thick, sand bags, and hopper loop holes.

Each detached section of firing

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trench is enclosed by a low but substantial barbed wire entanglement about 25 feet wide extending well round the flanks and to the rear. The extent of the entanglement at this position is unusual and due to the very short field of fire available in dense woods, in which no attempt at clearing has been made except to clip low hanging branches and to cut down a few scattered saplings.

The firing trenches are lightly held. A few men do sentry duty in each, while the remainder of the trench guard rest in their splinterproofs or walk about on the slopes in rear. The enemy's trenches are here quite close, in places not more than 200 yards distant, but invisible on account of the dense forest. Outposts are stationed close in front of the trenches. Individuals of the enemy sometimes creep forward, climb trees, and do sniping at close range. In such dense woods, grenade throwing is practically out of the question.

The supporting troops are sheltered in splinter-proof huts just behind the crest of the ridge and close to the trenches. The huts are of the usual type, partly dug into the bank, with timber framing and a roof of timber and earth. They are often provided with bunks and sheet iron stoves, and afford comfortable quarters.

Aërial observation is little used in terrain of this nature and the means of locating hostile positions are afforded by occasional favorable hilltops fiercely fought for on account of their value as observation points.

The next example is a position of three echeloned trenches in gentle, undulating ground quite open except for the trees along the main highways. The soil here is a chalky formation containing flint, disintegrating to a fine powder when exposed to the air.

The rearmost trench is continuous from end to end and very deep and narrow although dug in stony ground. It is located just inside a patch of pines at a distance varying from a few feet to a hundred feet and where, too near the edge of the woods, additional screening is provided by planting evergreen branches in front.

A continuous low wire entanglement lies close in front and there is plenty of head cover in the firing trench. Occasionally a substantial splinterproof is built in the line of the trench, like a sort of blockhouse, with a hinged board on one side that could be raised to give a continuous firing slit. The machine guns are in a casemate which also has a firing slit for infantry.

A number of observation stations, some open and some covered, are built along the parapet.

In rear of the trench and close to it are numerous substantial splinterproof huts for the men, and one with a very heavy roof, well sunken below the surface of the ground, for the telephone station.

From the left flank of the foregoing trench a communicating trench leads down the slope of the hill, where drilling and blasting of the ledge rock had to be resorted to in order to secure the necessary depth. From the end of this communication trench to the second firing trench of the echelon access is furnished by the reverse slope of the hill and a zigzag trench leading over the crest and a short distance down the forward slope.

The usual low barbed wire entanglement lies close in front, there being a double line near the left flank.

The splinterproofs in this second trench are all dug into the trench walls, front or rear. The machine guns are in casemates and some of them arranged to flank the front of the trench.

No close observation of the most advanced trench of this echelon was

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possible at the time the others were seen. The enemy's trenches occupied the forward slope of the opposite heights where they could be seen faintly by the aid of a field glass.

As at the locality described in the first example the field of fire from the trenches was comparatively short due to the presence of woods and the broken topography.

The most noteworthy feature of these trenches is the enormous amount of labor required to excavate such great depths in rocky soil filled with roots and to build the numerous splinterproofs and machine gun casemates. Such extensive work is only permissible and possible in position-warfare of long duration.

In spite of the steep slopes and rocky soils the trenches were quite wet and muddy due to much rain and the melting snows, but these conditions were immeasurably better than some of the trenches in the flat country.

In another section visited the country is quite flat and devoid of cover except for numerous villages which form natural centres of resistance, that is "supporting points." All the villages immediately in rear of the line were badly shot to pieces so that some of them afforded absolutely no protective shelter for troops.

The firing trenches in this locality are practically straight and traversed every 24 feet.

Along the firing trench all covered observation stations and machine gun emplacements are closed in by curtains to prevent the light showing through openings in the front. Four or five loop holes are built between each pair of traverses, some made of sand bags, some of the hopper type, and some being formed in steel shields. In some places the parapet was notched for the rifleman.

The wire entanglements are here a little further to the front than usual, being 40 to 50 yards from the trench.

The next position selected for an example is generally in open rolling country and constitutes in some sort a defile which though fairly wide is not roomy enough for decisive operations on a large scale. Operations in this region seemed to be purely defensive on both sides..

The defensive works consist first of a line of listening posts pushed 50 to 100 yards to the front and 150 to 200 yards apart. These posts are well dug in with overhead cover and wire entanglements and accommodate two men. They are connected with the main trench by communicating trenches leading through the main wire entanglement. Although named listening posts they really constitute a first line of resistance, as the men being well entrenched and covered can deliver a front and flank fire up to the last moment and then get back to the rear. The listening posts are also connected with the firing trench by alarm bells, mechanical and electrical, for warning the guards of the main line.

Behind the line of listening posts comes the main firing trench which is of the usual deep, narrow pattern developed during the war, having a depth of at least seven feet from crest of parapet to bottom of trench. The floor is covered throughout with boards which are useful and almost necessary where the trenches are held for long periods. The trench walls front and rear are revetted with plank or hurdles.

At intervals of 6 to 12 feet loop-holed steel shields 5 millimeters thick are set on the crest of the parapet with sand bags piled on the sides and across the top. At intervals are casemates, with overhead cover, proof against field artillery, containing three or four steel shield loop holes. When the artillery fire gets too hot for men in the open

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sections of the trench they can retreat to these casemates from which a fire can still be maintained. Each company front is also provided with two machine guns and one light grenade thrower.

The trenches on both sides lie generally in woods and are quite effectually screened from distant observation. Where the trench lies in more open sections it is hidden by laying boughs across the top. Many of the communication trenches leading to the rear are blinded throughout.

A low wire entanglement about 15 feet wide runs continuously along the entire front of the firing trench at a distance of about 20 yards. A charged electric wire is also maintained as an obstacle.

Many useful accessories were noted at this position; namely, electric searchlight and magnesium torches with tin reflectors for illuminating the immediate foreground; ammunition niches, hand grenades and gas masks in great abundance; signs everywhere indicating stations of the men, the limits of platoons and companies; the way to the commanders of all the units concerned; telephone wires forming a complete net of communication so that it was possible to talk from the first line direct to Army Headquarters.

The several company sections of the trench are assigned numbers which are entered on the accurate artillery maps. When an attack develops it is only necessary to telephone the appropriate number to enable the artillery commander to bring fire to bear on the threatened area.

In rear of the main firing trench, which is continuous, are second and third lines of trenches, at distances of several hundred meters, all provided with wire entanglements. The rear lines are not continuous but they are laid out so as to cover the foreground effectually and to afford mutual sup-

A flooded trench with raised wooden walk. Telephone wires on side

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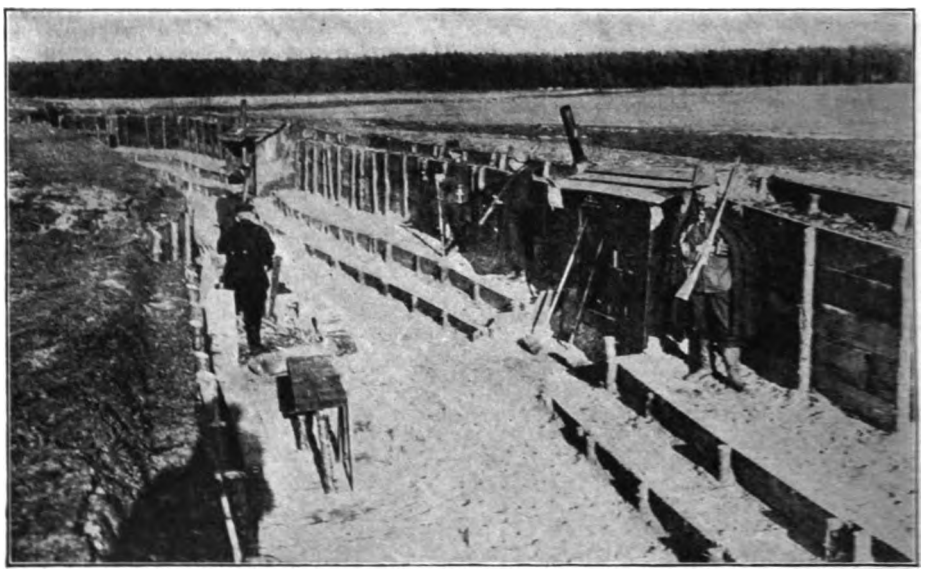
port. Many of the rear trenches are wholly sunken and the excavated earth scattered so that the trench is quite invisible from the front.

The entire arrangement of the defensive works is such that the firing trench can be guarded and held with the minimum number of men during the artillery bombardment, while enough men can be held at hand under cover, ready to repel an infantry rush notwithstanding the short field of fire imposed by the woods. The arrangements represent the maximum of concealment, cover, and dispersion so essential for a purely passive defense.

In a defensive position observed along the exposed sides of a wooded park there is a clear field of fire to the front and flanks. Each battalion has a sector to itself, apparently not connected with its neighboring battalions along the actual firing line but only by means of a second line of works, which also covers the gaps between the battalion sectors.

The firing line here discloses some interesting features. The main excavation along the front is continuous, 7 or 8 feet deep and 3 or 4 feet wide, not loop-holed or otherwise prepared for defense. The actual firing trenches are dug 5 or 10 feet to the front of this main trench and are reached by short communicating passages. They are not continuous but each is arranged for about a squad of men.



Breastwork in low, wet ground

In rear of the main trench, and reached also by short communicating trenches, are the excavated quarters for the officers and men. In front of the firing trench here and there are tunnels driven under the parapet to the front and opening into trenches running out about 30 feet toward the enemy. These are for listening posts. The earth from these listening trenches is carefully concealed and no parapet is built.

The exact reasons for the particular arrangements adopted in the examples outlined above cannot be stated on account of incomplete knowledge respecting conditions; such as, strength

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and disposition of opposing forces, detailed topographical features, hilltops, streams, natural routes of communication, etc., but they appear to have been located and built largely, if not wholly, for defensive purposes and supporting points as indicated by the depth and narrowness of the trenches generally and the continuity of the wire entanglements. It may be, however, that all positions on the western front are at first arranged for defensive action and the necessary modifications for the offensive made later at particular points from which the superior commander may have determined to launch an attack—many of these modifications may be made during the preliminary artillery preparation and only a few days before the actual assault on the enemy's lines.

LOCATION AND SITING OF TRENCHES

The location or siting of trenches including their trace is the first duty of the occupying troops in point of time as well as the first in order of importance. The principles involved remain unchanged, but their application has been somewhat modified by the peculiar conditions of the present war. The necessity for concealment or screening the entrenchments from the fire and view of the enemy's artillery and from his aërial observation has become greater than ever before. The effect of this is shown in a tendency to select sites behind rather than in front of the crest of a slight rise and to reduce the width considered heretofore necessary for a clear field of fire. This is shown especially in the location of the second line of entrenchments which have thus in several notable campaigns escaped the first artillery destruction and remained intact and ready to stop the assaulting columns that broke through the first line. The latest English manual states that the normal width of foreground—300 or 400 yards—will usually be found ample and that a still shorter field of fire is often considered sufficient for troops well trained, provided it is clearly commanded from the firing points and well protected by a good obstacle like a wire entanglement which should also be screened from the enemy's distant view. Some writers have recommended a field of fire 60 to 100 yards as sufficient on the ground that by the aid of wire entanglements, rifle and machine gun fire, field artillery fire, and perhaps hand grenades, an enemy's attack can be checked in that distance. It must be understood, however, that no positive rule can be given. The location of each trench depends greatly on the nature of the terrain and the circumstances. Some of the elements to be considered are as follows:

The necessity for concealment.

The topographical features of the ground to be occupied by the defender and of the ground that may be occupied by the enemy.

The width of field of fire deemed necessary in view of the weapons at the disposal of the defender.

The available obstacles, both natural and artificial, to the enemy's advance.

The available artillery positions for both the defender and the enemy.

The available forces of the defender.

The purpose of each trench or line of entrenchments.

The necessity for free movement of supports and reserves and supply lines.

The defender may also by the activities of the enemy be forced to occupy a less desirable position than he would choose if left free to make his selection, and this fact must be given due weight in studying the trace of entrenchments on actual battlefields of the war, especially when we en-

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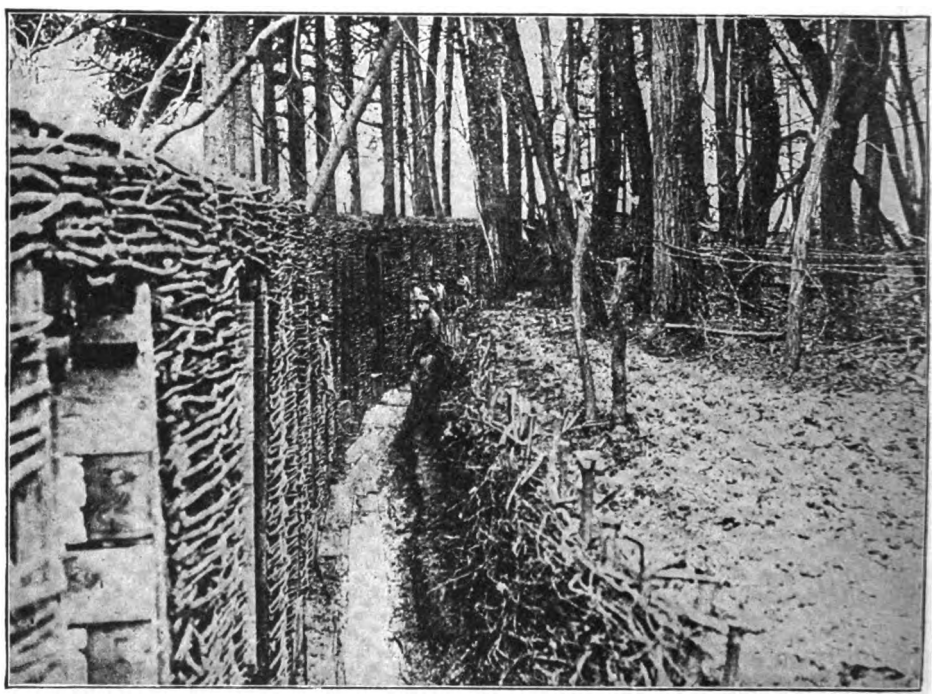
deavor in such studies to assign reasons for the selection of a particular site.

The trace of trenches should be such as to protect them against enfilade fire and to limit the effect of shell, shrapnel, and grenades that may strike in the trench. This requires ample traversing sometimes as close as one traverse in every four or five yards; until some proper supporting point is reached. They should not be turned obliquely to the main front as this exposes them to enfilade fire and does not materially increase the circuit that a turning force would have to march.

The firing trench proper need not be continuous; short lengths of trench are more easily adapted to the ground; communication between sections may



Shelters in wall of revetted trench

generally with space between traverses for one squad, say seven yards. The serpentine or zigzag trace is used where appropriate for trenches leading toward the front or toward firing positions of the enemy. The general line of the firing trench is frequently in salients and reëntrants of moderate departure from a straight front to provide mutual flanking support. Where the flanks of a line need protection against possible turning, they should be gradually refused in echelon be provided by trenches in rear as in some of the examples given.

The succession of roughly parallel lines of trenches, not generally continuous, consisting of firing trenches proper and of rearward lines not far back known variously as support, shelter or cover trenches, used for assembling, sheltering, and moving both the front line troops and their supports, while enabling the guard of the firing trench to be reduced to a minimum, is a noticeable feature of the organization

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of entrenchments in the European war.

In respect to the use of narrower fields of fire, General Mondesir in his "Essay Upon the Tactical Use of Field Fortification," 4th edition, 1910, says: "Formerly with weapons of short range and slow loading it was necessary to use the limit of the range in order to have time to reload. That reason no longer exists. Modern firearms have long range and can be loaded quickly. Magazine rifles even avoid the necessity for reloading. The full range can be utilized with advanced positions and with flanking trenches. The rapidity of fire can be used to secure in brief time the effect formerly obtained by long distance. Moreover, the effects of short distance fire are much more effective, insuring greater accuracy and more physical effect as one bullet may go through several men. This fire from the trenches would not be effective if the firers were exposed to the fire of the enemy's artillery preparation, but if they have escaped that and at the critical moment have to undergo only the fire to which they directly oppose their own, cover gives them a marked advantage."

Possibly in the above we may see the germ of the idea that the necessity for concealment and shelter during the artillery bombardment is to some extent superior to the requirement of a wide field of fire.

SECTION OF TRENCHES

The urgent need for concealment from artillery fire and observation again shows its influence in modifying the section of both firing and communicating trenches. The tendency already observed after the close of the Russo-Japanese War has continued and experience soon convinced the soldiers of the European armies that trenches should be deep and as narrow as would permit free movement; that nearly vertical sides properly revetted improved the cover and that visible parapets should be dispensed with as far as the nature of the soil and the features of the terrain would permit. Parapets 12 inches high are given in typical sections.

We therefore observe in the training camps trench sections as deep as 6 and 7 feet; total width of 32 inches with firing steps or banquettes, 18 inches above the bottom of the trench, 9, 12, or 16 inches wide. Practical field instructions direct that the firing trenches shall be made first narrow and deep enough for the rifleman to stand in and that later they shall be enlarged and deepened in rear until it is possible to pass and keep under shelter behind the riflemen posted along the parapet. Sections as narrow as 24 inches at the bottom seem to represent about the limit in that dimension.

The sketches and diagrams in the following pages are intended to illustrate and compare the latest trench sections in the United States service and the several European armies as far as available for publication at the present time. In actual use in the present war there are many variations from the standards prescribed in the field manuals with a decided tendency toward narrower and deeper firing trenches, less head cover, and much deeper shelter and communication trenches. After the war, each nation will probably adopt as a type a modified section based on a combined experience with its own standard forms and those of the enemy.

TRAVERSES AND PARADOS

Traverses should consist of the undisturbed ground out of which the trench is cut. A thickness of 6 feet and an interval of 4 or 5 yards is

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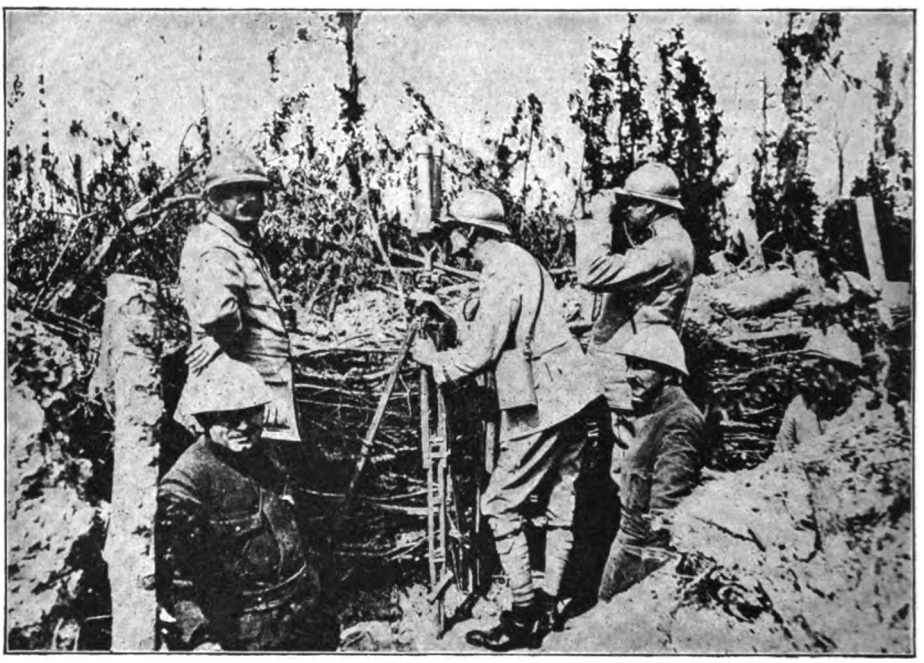
prescribed in some recent instructions. In plan the traverse should extend at least 2 feet back of the face of the rear wall of the firing trench. Parados are commonly used to protect the men against the back blast of shells striking in rear of the trench. Traverses are also in use in communicating and refuge trenches and they are frequently provided with shelter holes for the men.



An artillery observation station

HEAD COVER AND OVERHEAD COVER

The use of head cover and overhead cover must be carefully regulated according to the purposes of the entrenchment. There seems to be a tendency to reduce it in the main firing line where it might interfere with the rapid use of the bayonet in case the enemy should unexpectedly push through the obstacle and arrive at close quarters. On the other hand, we find its value appreciated in the cover trenches and many instances of the use of loop holes of the usual patterns, as well as the steel shield pattern, are noted at various points of the front. We find it recommended, however, that provision be made for firing over the parapet when necessary as when the enemy advances close to the trench or makes a night attack. When loop holes are not being used, all openings that might let the light through should be concealed by flaps of cloth, clods, or similar means.

SHELTERS AND COVER TRENCHES COMMUNICATION TRENCHES

On account of the narrowness of the firing trench it is difficult to pass men and supplies along it even though it may have been widened slightly for this purpose, so the practice of providing an auxiliary circulating trench a short distance to the rear, 15 to 25 yards, has been developed and we find them made quite deep, 8 to 11 feet, reached

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by steps from the short trenches connecting them with the firing trench; with nearly vertical sides revetted with some light material like wire netting or hurdles. Extremely deep and narrow trenches like "slit" trenches leading off the main approaches are designed solely for shelter during a bombardment. Men can barely squeeze into them and stand in a single row. The usual type of back trench is wider and often made sinuous instead of being traversed. It is used for posting reinforcements prior to an attack and for sheltering a garrison during a bombardment. It is also useful for removing the wounded on litters and for bringing up supplies. Litters are more easily carried along the sinuous trench than around the corners of traverses.

It seems to be admitted that protection against heavy shell and high explosives is unobtainable in ordinary trenches and shelters, so deep cave shelters or dugouts have been devised and they are found located under the parapet or front wall of the firing trench, between the firing trench and the back trench or in rear of the latter. The latter seems to be the best location. They are arranged to open into the nearest trench by galleries and steps and often have sloping ventilators leading from the open air down through the solid earth roof. These dugouts furnish sleeping places for the men off watch and are made dry and comfortable as far as time and means permit. It is important to guard against percolation of water through the roof by using a tarpaulin or other waterproof sheet. The thickness of the roof of dugouts varies from 3 feet furnishing cover against small shells to as much as 30 feet for protection against high explosive shell.

An important consideration is the possible use of the communicating trenches as firing trenches in case the enemy should break through a certain section of the line and swing around on either side of the gap in a flank attack on the ground in rear of the main line. To provide for this contingency, recesses, parapets, and firing steps are frequently found on the sides of the communicating trenches.

Drainage and the sanitary condition of the whole trench system must be carefully looked after. The bottom of excavations should be sloped or crowned and entering water drained off by gutters to soak pits, dry wells or sumps. It is often necessary to floor the bottom of the trenches with boards, grillages, brick, or whatever material is at hand. The latrine pits and trenches should have steps leading out of them to the natural ground to facilitate the removal of soil cans, buckets, etc. A liberal use of lime is recommended.

MACHINE GUN LOCATIONS

Machine gun emplacements may be formed at intervals along the firing trench by digging a narrow trench of equal depth extending about 15 feet to the front where it turns to the right and is widened out to accommodate the gun crew. The gun rests on solid ground at the end of the short trench just low enough to conceal its position when firing. As a rule the gun is not mounted in the daytime unless the enemy attacks but it is generally kept in position at night. Sometimes a sort of well is sunk in the trenches and the gun kept at its bottom when not in use; this plan may be dangerous in case a shell should burst near by and fill the well with débris. Machine guns so located are useful mainly for enfilade or flanking fire along the front of the firing trench and they support each other. Alternative emplacements are always built so that the guns may be

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moved to them if driven from a first position.

Emplacements for machine guns are frequently furnished with overhead cover and loop holes. This type as well as little separate works for the guns are easily distinguished in a continuous line of entrenchments when viewed from the front and great pains should be taken to hide them or disguise them.

Screened and revetted communication trench

It is important also for the attacker to be able to recognize the enemy's machine gun positions so as to destroy them with artillery.

One of the most valuable uses of machine guns is to remain in masked positions until the artillery bombardment has ceased and to come into action after the assaulting enemy has passed the first line trenches. It is noted that during the first assault of the Champagne offensive on September 25, 1915, the Trench centre was held up by four machine guns that had escaped destruction by artillery. Good locations for such work would apparently be along the communicating trenches in rear of the main front line.

CONCEALMENT

Concealment of positions, men and guns, as already stated, has become of the utmost importance in order to escape destruction by artillery. A single conspicuous feature may bring about disaster to a whole position. The methods already well known have been applied to an increasing extent; such as, blending lines and colors with the surroundings, avoiding sky lines and other contrasting backgrounds, avoiding conspicuous lights and shadows, actual material covering, construction of imitative features as dummy trenches, emplacements, fake tracks, etc. Experience with aërial reconnaissance has indicated certain facts that should be considered in planning concealment, for example: A continuous line of trenches is more visible than separate groups; straight trenches are conspicuous; trenches across plowed fields are easily distinguished; straw spread at the bottom of trenches is conspicuous; trenches against hedges are invisible; it is very difficult to tell whether trenches are occupied or not and this also applies to gun emplacements; tracks to gun emplacements are easily visible; tracks should be made to all dummy emplacements; trenches should be covered with brush wood to hide the deep shadows at the bottom.

COMMUNICATIONS

This feature of the defense which has already been touched upon under the head of communicating trenches has become of increased importance on account of the enormous supplies of ammunition, both small arm and artillery, that must be brought up, the necessity for very rapid movements for concentrations of troops, the long occupancy of the trenches in the siege

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war on the west front, the advent of motor and tractor transportation, and the extensive use of field railways branching from the main railroad network of the region and advancing to the immediate rear of the first line trenches. With the complicated system of routes of march and supply, it is readily seen that methods of direction and control become important and the trench-city must have its sign boards, street names, signal lights, and telephones. There must be no danger of taking the wrong road, when reinforcements or reserves are required to be, each detachment, at its designated station with clock-like accuracy. The higher commander must be in touch with each unit under his orders, and it is especially and absolutely necessary to insure close coöperation and good telephonic communication between the infantry and artillery. An artillery observer on duty in the advanced infantry trenches; artillery spotters in captive balloons or in aircraft; artillery maps with every trench and position duly plotted and numbered—all tend to keep the two arms in closest touch.

OBSTACLES

Entanglements of wire, both barbed and smooth, as heretofore, form the principal reliance for an effective, invisible, and not easily destructible obstacle. Wire of heavier section and greater hardness has been used to make the work of nippers or cutters more difficult. Loosely laid tangles have been found more effective than taut geometrical patterns, and the use of portable obstacles, like hoops or hollow spheres of wire, wooden framework caged around with wire, is noted as a means of temporarily closing roads, trenches, gaps in wire entanglements, etc. Concealment from artillery is advantageous. The main entanglements should when practicable be placed in a natural swale or depression of the ground or in a shallow and broad pit, 12 or 14 inches deep, scooped out for the purpose. It is found that obstacles should be not more than about 30 yards in front of the firing trench in order that it may be efficiently watched and covered by frontal fire at night.

Special means for the destruction of the wire entanglements have been tried, such as the running of heavy motor vehicles at speed against obstacles in the roadways and the firing steel grapnel hooks into the entanglement and then hauling them by a winch. Explosives fixed against the wire by soldiers may be used at night to a limited extent, but the wholesale destruction must be accomplished by accurate artillery fire. Machine gun fire is also used to "clean up" sections of wire that may have escaped the artillery.

ACCESSORY MEASURES

Almost every scientific development of the age has been called upon to play its part and it is possible only to mention airplanes, airships, and balloons, wireless telegraphy, searchlights, and other illuminating devices, incendiary and lighting bombs, asphyxiating gases, gas smoke and trench sprayers, smoke screens, liquid fire, mines and countermines, besides the other modern inventions already referred to in more detail as supplying means of offense and defense on a scale not known before.

DISTINCTIVE FEATURES OF TRENCH WARFARE

Until the official reports and technical descriptions of operations on both sides of this war have been written, coordinated, and thoroughly digested, it will not be possible to make a full and

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authoritative discussion of the methods of attack and defense and to draw conclusions that may be justly called the "lessons of war."

From the information now available, however, and from impressions given by narratives in contemporary publications, tendencies may be traced and the following features are pointed out as noteworthy and distinctive:

The unprecedented development and extent of positions intrenched in the field.

The numerous lines of trenches and alternative positions and the intricate network of screened and protected communications.

The use of heavier field artillery, and of mobile guns, mortars, and howitzers of the largest caliber made; the further development of high angle fire, and the extended use of high explosive shells.

The increase in the number of guns, field and heavy, serving with the mobile armies and the extraordinary expenditure of ammunition in preparing for offensive operations, in bombardments often lasting for days and weeks preceding an assault. A similar use of artillery on the part of the defense in destroying the attacker's works and in forming a "barrier fire" (tir de barrage) against the assaulting columns.

The greatly increased use of machine guns in concealed positions to flank trenches, to cover obstacles, to advance with attacking columns and to attack assaulting columns.

The measures taken to reduce the number of men in the first line firing trenches; to establish them in small groups separated from adjacent groups by traverses to prevent enfilade and restrict the effects of exploding shell and shrapnel; to hold the bulk of the garrison in support trenches for rest and sleep when the enemy is not active.

The measures taken to shelter from the more distant attack, the supporting troops and troops moving to the relief or reinforcement of the firing trenches.

The measures taken to hold supporting troops close to the firing trenches and to make rapid reinforcement sure and possible at critical moments.

The development of aërial observation, making it both possible and necessary to map accurately every topographical feature of the terrain, every element of the enemy's defensive works, noting changes in the latter from day to day.

The use of aërial observation in furnishing firing data, locating targets for the artillery and correcting shots.

The resulting necessity for indirect artillery fire almost exclusively, and for the effective concealment of batteries and trenches. Inconspicuousness has become of prime importance in the location and construction of field works.

Routine measures whose importance is due to the long-continued occupancy of the trenches at all seasons; for example, revetment, protection of earthwork against the weather and against the constant passage of men, drainage, sanitation, heating, provision or sleeping quarters, of hot and plentiful food at regular hours, of suitable clothing, provision for bathing the men and cleaning and fumigating their clothing in suitable places behind the lines.

Measures due to the more frequent occurrence of night operations, to the length, number, and intricacy of the trenches, shelters, storerooms, retreats, etc.; for example, the methodical and systematic numbering and naming of trenches and underground stations and rooms, sign and name boards to guide those constantly using the

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trenches, and special arrangements to direct new troops coming up during a combat, guiding and signal lanterns in the trenches at night.

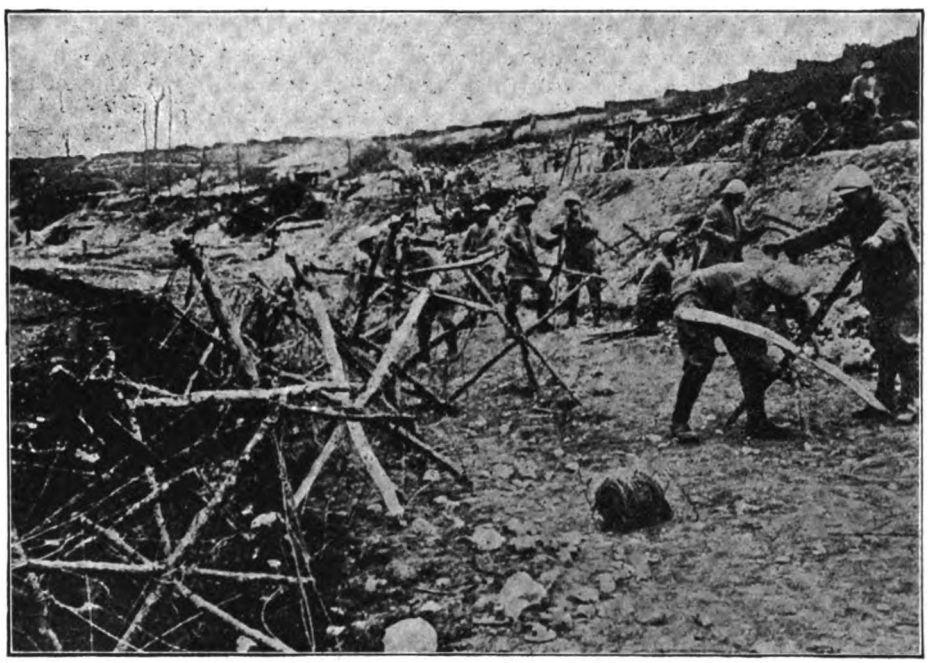
Measures for the rapid and abundant supply of ammunition of all kinds.

Accessory measures of defense and attack due to the proximity of the front lines of trenches, measures to prevent surprise, obstacles, hand grenades, periscopes, trench howitzers, alarm bells and guns, signals or cartridges, illuminating devices, listening posts and wire tapping devices, shields, loopholes, burning liquids, gases for suffocation or concealment, gas masks, trench sprayers for antidotes to gas, steel helmets, etc.

The further and remarkable use of barbed wire as an obstacle.

The extensive use of mines and countermines. Mines seem to be about the only means left for effecting a surprise attack upon the enemy. The explosion destroys the enemy's work and men and the crater furnishes a foothold for the attacker, if he makes an immediate advance. The effect is, however, very local and does not accomplish much of strategical importance in the long intrenched line held by the opposing armies.

Improved means of communication; automobiles and auto-trucks for moving men and supplies; improved roads in all parts of the theatre of operations and from the bases in rear; the use of railroads and field railways; the mobility of heavy artillery; aircraft; telephone, telegraph, and wireless telegraphy; visual signaling; pyrotechnic signaling, etc.



A form of barb wire entanglement

In the actual construction of trenches and field works the engineer has had recourse when possible to the best tools and appliances of his art. The troops have necessarily labored hard with pick and shovel, but it is noted

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that plows have been used in numerous instances to make the first deep furrow and to outline the trench. Excavating machines are said to have been used, but this was probably in the construction of ditches and trenches well in rear of the lines, for drainage or for alternative positions. Under favorable circumstances motor-drawn plows might expedite the work.

On account of the extent of country covered and the variety of soils and topographical features in the districts where trenches have been dug in this war, geology has played a more important part than usual. In some localities the soil is very favorable, digging easy, and slopes will stand almost vertical. Other soils are difficult for various reasons; very hard soils have required drilling and blasting; trenches have been formed even in solid rock where the overlying layer of soil was very thin; soft, sandy soils require special treatment as also do certain clayey soils when they become wet; soils may favor or hamper the work by the character and disposition of the successive strata in their relation to the ground water, which may, in one place, percolate through without noticeable effect, and, at another, may cause damage by flooding our own trenches or aid the defense by drowning out the enemy's galleries and mines.

In general, the deep and narrow trench with low parapet prevails, but practice and opinion are not uniform in this respect and, of course, design must be modified to suit the terrain and the conditions that lead to the occupation of the position. One set of field instructions describes a standard firing trench as only 18 inches wide with no head cover because, owing to the proximity of the enemy's trenches, head cover prevents sufficiently quick resistance to bayonet charges; the support trench is given as 16 feet deep and only 24 inches wide as near as may be with recessed kitchens and dressing stations; the firing trench is recessed for every five rifles. The examples of actual positions given in the body of this article indicate considerable departure from the above rules.

Sufficient accurate information to permit generalization as to the trace and location of trenches in relation to the terrain is at present lacking. We find instances of trenches on the military crest with broad fields of fire, others in dense woods with very restricted fields, others in rear of the crest and on the reverse slope of hills.

Some writers advocate the latter position, others a position at the foot of the forward slope of hills. Concealment from artillery fire and from aërial observation seem to be the guiding principles in cases where departure is made from the usual practice of locating on the military crest; extensive field of fire is sacrificed in order to secure concealment. To quote from recent field instructions: "A field of fire of 100 yards is regarded as satisfactory, if it cannot be increased without loss of concealment from the enemy's observation stations. The concealment of obstacles (such as barbed wire entanglements to check the enemy's advance) is of importance as said obstacles may assist the hostile observer in locating and ranging on trenches in rear."

And again: "The skilful siting of trenches back of a slight rise behind a second hedge with obstacles hidden in the same way has been found to afford the most satisfactory concealment in the earlier stages of an attack."

"The firing trench is located on the reverse slope of a hill if possible."

Heavy frontal fire from all sections is deemed essential, as an attack is along the whole line as a rule and one

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section cannot be relied upon to flank those on either side. The sinuous or serpentine trench, to secure flanking fire, seems to be more used than the zigzag or offset communicating trench.

The importance of map making in the most minute detail has forced itself upon those charged with directing operations at the front. Maps made in time of peace furnish merely the framework; front line and aërial reconnaissance and photography are utilized constantly to locate and plot, upon large scale maps, suitably divided into numbered squares or zones, every feature of the topography and of the field works and to keep this work up to date. The enemy will take advantage of every clump of trees, every house, every fold in the ground, every little stream, to conceal his guns and his movements, to assist his own operations and to make more difficult those of the opposing side. The artillery and the riflemen must know the exact location and the relative importance of the targets they are to fire upon and destroy. A new position, emplacement obstacle, road, or path must be discovered as soon as made, duly located and plotted on the map. Of the defender's terrain also an accurate and detailed map of all roads, paths, trenches, shelters, etc., must be made; it is easy to get lost in the labyrinth of covered ways and a mistaken route or wrong turn at a critical time may be fatal to the enterprise in hand.

Trench warfare is a work of minute detail and there is no room for rough and ready estimates or for mistakes and confusion. Troops must move and positions must be taken unerringly in order to insure coöperation and success. These requirements, while applying to the handling of all large bodies of troops, are made more difficult of accomplishment by the restricted and concealed roadways, like the communicating trenches and by the necessity for many night operations. The above considerations point to the character of the training required for this particular kind of fighting.

In other parts of the war zone of Europe manœuvre warfare is being conducted on an unprecedented scale, and is of greater importance than in former wars in view of the immense armies to be transported, manœuvred, and supplied. The conspicuousness of

Observers in firing trench; birchwood revetment; plank firing step

trench warfare in the west does not in the least mean a diminished importance of manœuvre warfare; therefore, the training of all arms of the service for the latter as well as for the former demands our utmost attention in time of peace. Trenches are powerless unless manned by a well-trained, well-seasoned infantry that knows marvellously well how to shoot, march, fight, and endure privations and punishment, as well as to dig trenches and to make use of ground. A hard riding

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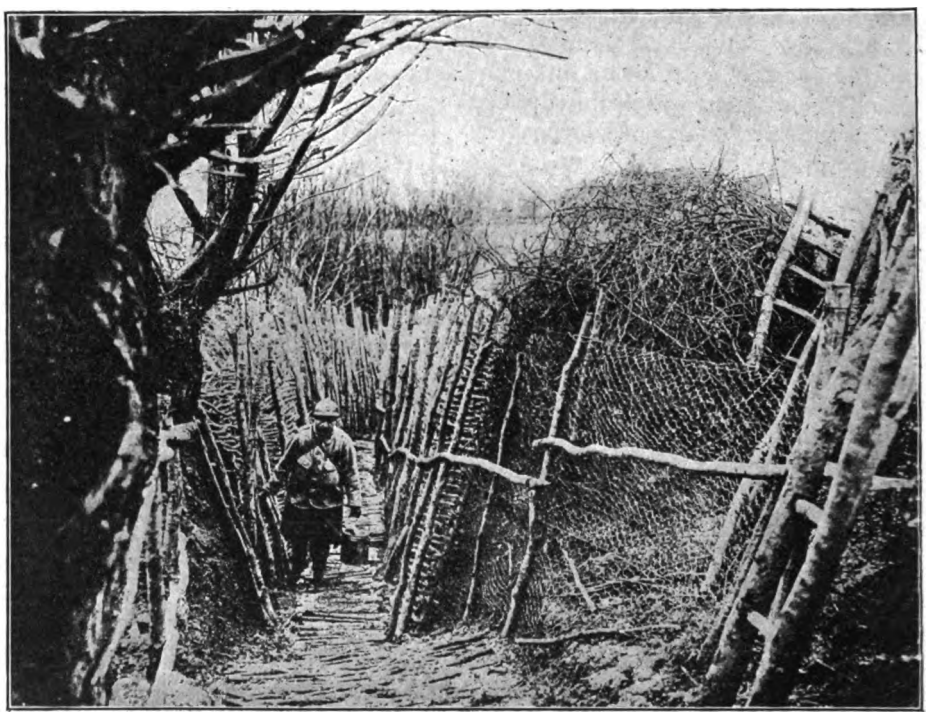
cavalry trained to fight on foot and to occupy trenches, if necessary, as well as to manœuvre on the enemy's flanks, is as important as formerly. Field artillery of greater range, power, and mobility, improved by every modern device, trained in accurate observation and shooting, fully equipped and plentifully supplied with ammunition of the most approved type, is needed in greater numbers and should be kept always in working order. More machine guns should be supplied to every arm, including the field artillery. The special work of the supply, sanitary, engineer and signal troops has become of more importance, in proportion to the magnitude of the operation and the greater necessity for skilled and accurate detail in each service. Aviation has become a specialty and demands recognition as a separate arm or corps of the service.

The training of the individual soldier is, of course, necessary and highly important to himself as well as to the duty he is expected to perform, but of vastly more importance and more difficult is the training of the great tactical units of an army, the systematic union and welding of individuals into a body whose officers, agents, and members work together toward a common end in all that concerns individual effort and the utilization of available resources.



Entrance to a communication trench; wire mesh and birchwood used for revetment

This means systematic effort and organization, not only of men into battalions, regiments, and divisions, but of all our resources, not only in matters of great moment and large scale but in the smallest details of disposition and supply; in the mobiliza-

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tion of industries, of materials to be found in our markets, of the activities, energies, and appliances of all of our great population; in assigning tasks and distributing tools and materials; in laying out and constructing trenches at probable points of attack; in supplying food and ammunition, in marching up reinforcements; in timing assaults; in all happenings and activities where the maximum united effort of thousands of individuals is necessary to accomplish the desired end.

Should an attack come upon this great country of ours from without, it will come with an impetuosity, a suddenness and power intended to sweep us off our feet before we can gather together the necessary resisting forces. Every means known to the enemy and transportable to our shores will be brought into action and we must be prepared in some degree to neutralize them.

A prominent French periodical (*Revue de mondes*, July, 1915) remarks:

"Evidently the time to draw conclusions has not yet come, but it seems at first sight that hereafter nations having some concern for their safety will make it their first duty to build in advance in time of peace substantial and numerous lines of trenches on their frontiers. Apparently nothing is more effective in stopping an enemy who is as well provided with material and as brave as ourselves and at the same time superior in numbers."

A little reflection will, therefore, convince most persons that it is desirable for the United States to train its potential armies in great groups like divisions and to give them practical experience in trench warfare, defensive and offensive, on a scale approximating that of actual service against an active and better trained enemy who is at the same time superior in numbers. The simple reason why we should learn to build and use trenches and other field works, to attack them as well as to defend them, is that an enemy will bring against us weapons and methods that will compel our extemporized troops to adopt that method of warfare, whether they are pleased thereby or not, for the primitive object of self-preservation, and to secure a breathing spell, pending the assembling of more men and munitions. We patriotically and firmly believe that such a condition of affairs would be only temporary and that after a long breath we should launch an offensive that would drive the invaders back into the sea.

But despise not the lessons of organization as taught in all the great enterprises of men and let it not be said after we have gained the victory that "the length of the war and its worst hardships were due to want of organization."

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RSAL MILITARY SERVICE *id the* PUBLIC HEALTH

By C. E. A. WINSLOW

(*Professor of Public Health, Yale School of Medicine, New Haven, Conn.*)

THE proposal that six months of each young man's life should be withdrawn from immediately productive labor, or from study, and devoted to compulsory military service was at first blush highly distasteful to many Americans. Fear that military service would lead to militarism could be met by an appeal to the experience of Switzerland and France; but the natural and proper reluctance to sacrifice so considerable a fraction of the economic energy of the community remained as a serious objection in the minds of many thinking men.

This objection has been overcome by two distinct but converging lines of argument, so that to-day the principle of universal service is freely accepted by many thousands who would have rejected it five years ago. In the first place the experience of the Great War and our entry into it has made it clear that the possibility of international conflict is so real as to warrant very considerable sacrifices to ensure against its risks. In the second place closer study of the potentialities of universal service suggests that the time devoted to such duty would bear even in times of peace fruits which go far to justify it, wholly aside from any military needs.

I propose to deal very briefly with one of the many aspects of this latter phase of the argument for universal service: the probable effect of such service upon the public health. And I shall restrict the field still further by discussing only the problems of controlling the spread of communicable disease, leaving aside the value of military training from the standpoint of personal hygiene.

The communicable diseases are all caused by the transfer of infected material from one person to another. The primary essential for their control is the education of the public in the means by which such transfer takes place and the methods by which it can be prevented. The accomplishment of large communal undertakings, such as the installation of water works and sewerage systems, demands intelligent public support; and many of the most serious problems of modern sanitation can be solved only by the initiative of the individual citizen on the farm or in the tenement.

It would mean much for the public health if every male citizen had been taught through the practical routine of the camp what danger may lie in the improper disposal of waste materials. The return to civil life each year of hundreds of thousands of young men trained in principles of waste disposal, applicable to the farm as well as to the camp, should accomplish more than all the boards and commissions now laboring to control typhoid fever and hookworm disease in our Southern states.

The lessons that must be taught to every soldier in regard to the danger

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of polluted water and the methods by which water of suspicious character may be rendered safe will not be forgotten after the training period is over.

An adequate system of military training should include instruction in regard to the insect-borne diseases and the methods by which fly breeding and mosquito breeding may be controlled. The elimination of these pests is a fundamental of military hygiene for troops operating in warm climates, and the lessons taught to the world by United States army surgeons at Panama have still to be applied to many American communities under the régime of civil life.

Relatively great progress has been made in the control of diseases such as typhoid fever, malaria, plague, and typhus fever, which are spread by water or by insects, as compared with measles, diphtheria, scarlet fever, the common cold and other infections transmitted by more or less direct contact. Measles, for example, remains one of the greatest causes of morbidity in the American army. Even in connection with these diseases, however, military training should prove of great value. The training of the soldier emphasizes the possible danger from what may seem at first a trivial ailment, and the importance of prompt medical advice and precautionary isolation in any illness which seems likely to be of a communicable nature. Thus, for example, a typical sanitary order issued from the headquarters of the First Connecticut Infantry at Nogales, Arizona, July 4, 1916, contained the following passage:

> "Sickness: The command is exposed to forms of sickness new to its experience and special care is needed to avoid them. Contact with natives is dangerous. Purchase of food and beverages from unauthorized hucksters and peddlers is forbidden. Cases of diarrhoea, fever, or skin eruption will report at once to company commanders and by them be reported to the surgeon. Each man will daily examine his clothes, body, and head for vermin and all cases found will report at once to the surgeon. All forms of vermin are extremely dangerous as causes of disease. Venereal disease and alcoholic drinks are particularly dangerous in this climate."

There is a special emphasis here on the problems of a semi-tropical climate; but the fundamental lesson of watchfulness, the realization that symptoms of diarrhoea, fever or skin eruption require immediate attention, involve principles of universal application.

Since communicable diseases are spread almost exclusively by the transfer of bodily discharges (including of course sputum and mouth spray) from one person to another, habits of personal cleanliness are of supreme moment in their control; and since the factor of vital resistance plays a greater or less part in determining their onset, habits of every day hygiene are of almost equal importance. Take one other excerpt from the sanitary orders issued to the First Connecticut Infantry, July 4, 1916, and consider what its lessons would mean if applied in daily civil life.

> "Personal Hygiene: Continuous caution and an exact routine are necessary to preserve health under new, and particularly under present, conditions. Proper clothing will be worn to protect against the sun and cold, keeping the hat on and sleeves down at all times in the open; a careful toilet made each day; hands washed before eating and after using the latrine;

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teeth brushed at least twice a day and particularly after supper or before going to bed; head washed with plain water once a day, and with soap once a week; hair kept short; ears washed once a day and the canals cleaned out carefully once a week; bowels emptied once a day, preferably before breakfast; full bath taken twice a week and oftener if necessary and possible; socks changed daily; undercloth-ing worn during the day not to be worn during sleep at night; cloth-ing aired and washed frequently.

"Company officers will assure sufficient rest and sleep for their men. Dissipation and noise at night are prohibited. Squad lead-ers will exercise constant super-vision over the hygiene and health of their squads."

Among the more direct and obvious benefits of military service mention must of course be made of the protec-tion of the recruit by vaccination against the danger of smallpox and typhoid fever. The latter of these diseases was once the great scourge of armies and was in large measure spread from the military to the civil population. For years after the Civil War and the Spanish War its prevalence in certain localities was conditioned by the previous neighborhood of en-campments or by the infections brought back by returning troops. Now, thanks to vaccination, all this is reversed. Typhoid has been banished from army life and an army coexten-sive with the population would mean universal vaccination and the disap-pearance of typhoid fever as a serious factor in the death rate.

The precautions taken in the army to avoid the development of the venereal diseases cannot fail to have a far-reaching influence upon social hy-giene. If sexual irregularity is con-doned as an inevitable necessity, as has sometimes been the practise of military authorities in the past, the introduction of prophylactic measures can only lead to moral degradation and ultimately to physical deterioration as well. When coupled with an earnest effort to suppress the exploitation of organized vice in the neighborhood of encampments and with sane modern medical instruction in the principles of sex hygiene, such measures may on the other hand prove of immense value in the campaign against these sinister maladies.

The single fact that under a system of universal service every young man at the threshold of adult life would undergo a thorough medical examina-tion, would bring in a return equivalent to a large proportion of the social cost of the whole system. Such an exami-nation if properly conducted would re-veal thousands of cases of tuberculosis in an incipient and curable stage; and tuberculosis is only one of many dis-orders in which early detection of the trouble opens the door to successful prophylaxis.

All of these immediate and specific benefits to be derived from a system of universal military service are per-haps outweighed by its more remote and subtle influences. The argument that has counted most strongly in favor of such a system is its far-reaching relation to the attitude of the citizen toward the state in its bearing on every phase of community life. It is useless to debate as to whether the individual exists for the state or the state for the individual. Both proposi-tions are manifestly true. The real question in the case of a given nation is whether these complementary as-pects of the truth are properly balanced. So far as the United States is concerned there can scarcely be a

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doubt that individualistic tendencies have too exclusive possession of the field. We are in no danger of forgetting our personal rights. We are in considerable danger of neglecting our collective duties. Universal military service is a concrete definite demonstration of the fact that the citizen owes a duty to the social organism as a whole, that there is something beyond the personal life, even beyond the family life, to which he owes allegiance, and for which he must be ready at a moment's notice if need should arise to step out—in the imagery of a recent writer—from his warm, well-lighted fireside into a dark winter's night. A keener sense of such responsibility is needed in America and is particularly needed in connection with the problems of the public health. And because I think universal military service would cultivate such responsibility I have come to believe in universal military service.

President John Finley has drawn one of his characteristically vivid pictures of how the spirit of the conscript should actuate every duty of civic life:

"One of my companions on the night of August 4 was a French maker of meerschaum pipes who lived in London—and proud he was of his occupation, for he did not make ordinary pipes. He had closed his shop in London and was going to find his uniform and outfit at Rouen. He was most courteous and helpful to me, serious and quiet in conversation, making no complaint of sacrifice, making no boast of patriotism; he even admitted a bit of fear, in expressing the hope that whatever happened it would not with him come to bayonets.

"This unquestioning, unhesitating, unboastful response to a call which involved the loss of one's own business or fortune or comfort, and might mean loss of life even, gives a concrete illustration of what I mean by the mobility of personal freedom and initiative, coexistent with a readiness to be mobilized by a nation's aspiration or even a community's need.

"I translate this experience into the terms of our everyday life, and I make it graphic to myself by thinking that every man has an imaginary uniform (as every German soldier and French soldier had in waiting his green-gray or his blue-and-red uniform) an imaginary uniform of his own measurements always in readiness in home or shop or office or in some public locker, that he may don at call of his community, state or nation, or perhaps at world-need; when under compulsion he goes to vote, to pay his taxes, to fight against dishonesty, inefficiency, or waste, to inform himself upon public questions or upon his public duties, just as one studies tactics in order to help in his country's defense, or goes to school as an alien to learn the language and institutions of a new land, or joins his neighbors in promoting the health of his community, in conserving resources, in securing means of healthful recreation for children and youth, in improving the highways—when, in short, he performs any one of a hundred offices that are required of him as an efficient unit in an organized society. I am to-day a maker of meerschaum pipes, a peasant gathering my harvest, a college professor (as young Boutroux, once a Princeton teacher, now serving his France), a surgeon (as Carrel, once in a great laboratory here, the recipient of the Nobel prize, now serving his France in a hospital near the front); tomorrow I slip on this invisible garment and I am a selfless, nameless, numbered patriot. And the next day I am working at my delicate pipes again, back in my field, or at my desk, or in my private laboratory—that is, if I am

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not killed or wounded in battle or suffocated in the trenches.

"I think it vital that we should keep personal mobility—I mean, of course, mobility of mind, of struggle, of initiative, of enterprise, freedom to express the individual soul through its self-imposed struggle. That is in itself a precious thing. But, I repeat, there must be with it a frequent, habituated coördination of these freedoms, a mobilization by the common ideals, by the national needs, the purposes of a community—a movement in which the individual completely forgets himself.

"There must be the magic garment in every man's wardrobe, whose weaving must be begun in childhood or youth, which will take him outside of himself and his selfish interests, however worthy they may be.

"This is the social scheme through which the state is to have the fullest value of individual potencies, and yet is not to suffer from individual liberties. It is the only practicable way for a democracy; between hard, intemperate individualism on the one hand, and a socialism which would require permanent wearing of uniforms by all, on the other."

I should be very sorry if such benefits as have been suggested should be limited to men. The industrial revolution has put an end to the conditions under which the sphere of women could be limited to "the kitchen, the cradle and the church." The Great War, a war between peoples rather than armies, has shown that even in times of national conflict the woman in the hospital and in the munition factory is as vital an element in defense as the man in the trenches. The strength of a state can be measured by the extent to which its members—all its members—are bound together by a sense of the common organic life, of the common democratic purpose. I conceive one of the greatest values of universal service to be the cultivation of this sense of social responsibility. And women need it as much as men; perhaps, on account of traditional individualistic elements in their education, even more than men.

I look some day for a period of universal military training for the whole population, in which men will devote themselves primarily to military defense and incidentally to the cultivation of the many civic virtues which may be made to flow therefrom, and in which women might divide their time between nursing and the art of defending the community against the subtle enemies which threaten it in times of peace with a deadliness greater than that of many battles. If every woman were trained, not by occasional classes but by a six months' intensive course with field work in hospital and under a public health nursing staff in the tenements, in first aid, in home nursing, and home sanitation, in the control of communicable disease, in infant care, in the hygienic treatment of tuberculosis—we should see a revolution in preventive medicine such as the world has never known. America will follow Europe in adopting the principle of universal service. May she not transform it into something far greater and far more significant by making this service really universal, and by mobilizing the whole force of the nation against the enemies of peace as well as the dangers of war?

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OUR NEED *for* MILITARY AIRPLANES

By PHILIP J. ROOSEVELT

IT IS common knowledge that the United States is not prepared for war in the air. The Navy and Army are woefully short of aviation material and personnel, and the most discouraging part of the situation is that it is impossible to get either machines or trained aviators without many months of hard work. The most serious problem is that of getting machines. A United States Army officer recently wrote to me and said:

"Airplanes are hard to get in sufficient quantities and with promptness. The experience of officers in the Aviation Section leads them to the belief that estimates have to be made and orders placed for airplanes about a year ahead to insure the delivery of specialized military types."

Developments in the aeronautical industry are so rapid that any airplane ordered one year in advance is pretty sure to be obsolete by the time that an Army pilot takes it into the air. But fortunately the types of machines that are needed in war have now become pretty definitely classified so that it is not difficult to tell what kind of machines this country ought to have for war-time use.

First of all there is the small, high-speed "pursuit" type, generally carrying only the pilot, who fires his fixed machine gun by aiming his plane. This type is the most spectacular war machine. Its business is to protect other airplanes on photographic or bombing expeditions and to pounce upon and destroy all types of enemy airplanes. Abroad the Fokker, Nieuport, Spad, Bristol, and Sopwith are all machines of this type. Mr. F. W. Lanchester, the eminent British aeronautical authority, recently described them as machines consisting of "the largest possible engine surrounded by the smallest possible fringe of airplane." These machines measure less than thirty feet from tip to tip and weigh often less than 1,000 pounds. They are capable of a speed of well over 130 miles an hour, can dart, dodge, and manœuvre so as to present a bewildering target, and can climb to great altitudes in a very few minutes. A rate of ascent of 1,000 feet a minute is by no means exceptional.

It is with such machines as these that modern armies obtain command of the air, for these machines can defeat in battle anything that can be brought against them, in much the same way that the little kingbird is able to drive the mighty hawk out of any part of the sky.

The second type of machine, almost equally important, is that of 300 horsepower or even higher, designed to carry at least two men with bombs, cameras, and defensive guns. These machines may carry three men in tandem, with the man in the centre operating the controls and with men firing machine guns from both the front and rear cockpits. They are useful for raids and for making very long reconnaissance flights of from six to eight hours. Fitted with floats for

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landing on the water, this makes an ideal type of machine for coöperation with coast artillery.

The third type of machine is intended for photographic work, for spotting shots for the artillery, and for signalling hits. It need not be of large weight-carrying capacity or extreme high speed, but on all its expeditions it will require the protection of at least one of the little high-speed fighters. This machine should also carry a gun for self-protection.

The types of machines needed for the Navy are not nearly so well defined. The problem of the Navy is the protection of the main battle fleet. In case of war every energy in the Navy Department should be directed to bring about the destruction or surrender of the enemy's fleet. This may involve an engagement 2,000 miles away from the Navy's nearest base. At the present stage of development of heavier-than-air machines it seems impossible to build an airplane which can operate effectively 2,000 miles from its base. Rigid dirigibles of the Zeppelin type might do it, but it will be many months before a heavier-than-air machine can be built to do this work. Yet in any engagement the Navy would be at a great disadvantage without airplanes to reconnoitre over the enemy fleet as well as to spot shots for the battleships. The United States Navy therefore is trying to develop a type of small seaplane, a dozen or more of which can be carried on a single mother ship. These could be launched whenever an engagement was imminent, and after the battle could be hoisted aboard the mother ship again.

The trench warfare of Europe has developed an amazing demand for stationary observation balloons, which are used by artillery observers in connection with the big guns for range-finding and spotting.

The recent visit of the German naval submarine *U-53* to the United States has brought home to this country the danger which submarines operating from distant bases are to our shipping. The most effective craft for finding submarines have been found to be small dirigible balloons which carry, slung under the gas bag, the car or body of an airplane. This body contains the engine and propeller as well as the pilot and observer and fuel for ten hours' flight at full speed or for sixteen hours at reduced speed. These craft, originally developed in England, and officially termed Sea Scouts, are better known by the popular name, "Blimps." While they are unarmed and unarmored they are nevertheless the most effective craft known for discovering submarines, as they can fly safely close to the water at very low speed and are equipped with powerful radio apparatus. A submarine once discovered by them has little chance for escape. The United States Navy has ordered sixteen of these lighter-than-air ships and the contracts call for delivery before July 10, 1917.

The brief summary above gives an idea of the types of airplanes which the Army and Navy need. Up to the present time none of these types has been built in this country. No American airplane which mounts even one effective machine gun has ever passed the Government's tests. Experiments are under way by no less than four companies toward the development of satisfactory "pursuit" machines. None of these experiments has as yet been entirely satisfactory. By the end of the summer, however, two or three types of fast, single-seated fighting airplanes of a satisfactory character should be on a production basis. Machines for bombing and photographic work, too, are being developed, so that in a year or eighteen months from now the Army

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and Navy should be well on the road to the solution of the problem of how to get satisfactory war machines. In the meantime there are being built in the United States to-day very satisfactory types of training airplanes. American training airplanes are as good as those built anywhere else in the world, and this fact indicates that when American engineering talent has had an opportunity to solve the problems presented in the development of specialized military types of machines our aeronautical material will be the equal of any. But at the present time the ugly fact is that military types of machines are not being built in this country. To send even the best aviators up in the air in American machines to oppose fliers equipped with such machines as are being built in Italy, Germany, Austria, France, and England would be nothing short of murder. Moreover, we cannot hope to get any large quantity of airplanes, of the types that would be useful in war, short of a year.

If it is necessary that blame be placed anywhere for this sad condition of affairs it should be placed on Congress, which, up to 1916, appropriated only the most niggardly sums for aeronautics.

The aeronautic industry has literally been an "infant" industry, and without governmental encouragement it could not be expected that American airplane constructors would invest the large sums which are absolutely necessary for the successful development of new types of airplanes. But on August 29, 1916, President Wilson signed the Army Appropriation Bill, carrying $13,281,666 for Army aeronautics and $3,500,000 for Naval aeronautics. These appropriations have given the necessary stimulus, and truly remarkable progress has been made since this money was appropriated; but the work of months cannot be done in a day. What the development of a new type of airplane means can be faintly guessed when it is known that one Eastern constructor has spent more than $450,000 on the development of a small, high-speed fighting pursuit machine, and this machine will probably not be ready for the market for several months, certainly not before August, 1917.

When Congress showed by its large appropriations a year ago that it was determined to build up a real aeronautical arm for the national defense of the United States, two problems had to be solved: the problem of material and the problem of personnel. The personnel problem is now in a fair way toward solution. Government training schools have already been established at Mineola, L. I., Memphis, Tenn., Essington, Pa., and San Diego, Cal., and others will be established as soon as Congress allows the Aviation Section to secure by lease or purchase proper sites and as fast as machines can be delivered. One curious fact is that the Army has found it easier to get pilots than to get mechanics, so that good mechanics are more valuable than good pilots. A large field near Hampton, Va., has been purchased and laboratories are being erected there to carry on the experimental work which is necessary in developing military airplanes, bombs, cameras, radio sets, and other apparatus. The Naval flying school at Pensacola, Fla., is training fliers from the Navy and Marine Corps and the Naval Militia.

The most pressing aeronautical need of the United States to-day is the development of satisfactory military types of airplanes for the Army and Navy to use in case of war.

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SOME EFFECTS *of the* WAR *in* BELGIUM

By JOHN A. GADE

(*Recent American Relief Commissioner to the Province of Hainaut, Belgium*)

A FEW weeks ago I asked one of the great bankers of Belgium, who has long been a prominent figure in his country's politics, what political changes he believed the war would bring about in his country. He looked out of the window at the German patrols in the street and then replied: "A sense of patriotism so great and passionate that my countrymen have never even dreamt of it; a love of country which will practically engulf all selfish interests. Then I believe there will be the miracle of tolerance, of mutual trust and understanding between Catholics, Liberals, and Socialists; and lastly, even though reconstructed Europe should once more guarantee Belgian neutrality, I feel certain all parties in our Chamber of Deputies will unite in demanding large budgets for army and navy, universal conscription without any restrictions whatever, and our forts and entire machinery of war put in the best possible condition.

"You know," he added, sadly, "how we have for years been trying to make the clerical party wake up to the need of universal conscription; how we were only partially successful, and then too late. Had we started it all ten years earlier, we should have had sufficient men to stem the German tide much longer and give poor France more time in which to prepare for our common enemy."

This has been Belgium's experience, and this is the lesson she has learned.

The little army, that is now so valiantly holding the western line by Dixmude, counted all told at the time of Antwerp's fall approximately forty thousand; it now numbers over two hundred and fifteen thousand splendidly equipped and officered fighting men. Risking their lives to rejoin the beloved red, black and orange flag, many interned Belgians have escaped over the double rows of electrified wires which bar the northern frontier, past sentinels ever ready with finger on trigger, and crossed on the little Flushing packet, only to hasten back across the channel to offer their lives again toward the liberation of their country.

Hundreds of families of the educated class are to-day facing the problem, when their boy reaches his seventeenth birthday: "Shall he run the risk of deportation, or that of escape to join the colors?" I have never known a decision in favor of the former alternative, but I have known many who have failed in the perilous attempt to cross the border.

Belgium is perhaps the most industrious, the most frugal, and in her manufactures the most skilled little country in the world. She detests war. Despite having been the battleground of other nations for centuries, on account of her unfortunate geographical situation and lack of natural barriers, the

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country itself is the most peace-loving in Europe. All this little nation desires is to be left alone, to live in peace and on friendly terms with all her neighbors, to work hard and cheerfully twelve or fourteen hours a day in her coal mines, in her glass and gun factories, at her lace bobbins or in her quarries and beet fields.

Belgium was very wealthy. The well-to-do-farmers, instructed by their curés, voted Catholic tickets against universal conscription, which would have taken their sons from the plow. The wealthy "industrial" drank his good Burgundy and vetoed universal training—all that would mean discomfort. The great merchants of Antwerp listened to Teuton friends in their counting houses and exclaimed: "How ridiculous for Brialmont to be allowed to spend such sums on Liége and Namur! And for Belgium to bother about soldiers? Why, has not her neutrality been guaranteed by all the powers, and most especially by our great eastern friend!"

Now Belgium knows. And the mothers kiss their boys farewell and send them to the front. They will not return to peaceful pursuits until the mark of the beast has been obliterated.

All this means such a change as only great affection or great anguish can work in the hearts of men and in the very fibre of a nation. The sword has entered her soul, the scales have fallen from her eyes. When Belgium's great martyrdom is over, all that is left will be ready and eager to stand on guard. That is what has happened. Germany has turned a hive of tireless, industrious bees into a nest of hornets.

The fact that there are two races in the country has made political unity extremely difficult. Fleming and Walloon have each pulled their own way and had their own language, with conflicting interests, and different intellectual development. More than this, the independent governments of the various provinces being as old as the hills, a centralized national government was foreign to all their ideas. As you would have been in the Middle Ages a Florentine or a Venetian, and not an Italian, so the burgher of the Low Countries is, at least in feelings, very often a Liégeois or an Hennuyer.*

What has the war wrought? A unified nation has come out of the awful womb. It thrills at the thought that all its children, whether of French or Dutch or German stock, will forever feel and know that the world contains no more glorious name than that of Belgian. The Belgians of to-day are the Spartans of old. Trial by fire has welded them into one nation.

Prior to the war few took much interest in the present royal house; few knew or cared much about the King. Doubtless he was a good man, certainly a modest and able one, but that was all. His uncle had a remarkable capacity for business, had industrially and financially done wonders for the country; but his dirty linen had been washed rather too publicly.

But now one heroic pathetic figure stands out against the lurid background of the battlefields, himself in the vanguard of his little troop, the personification of every kingly quality, the father of his country. The name of Albert, King of the Belgians, is in itself a benediction. "Le roi heros" is the inscription under all his pictures: a knight in whose breast burns the noblest fire of chivalry. A Sir Galahad of to-day!

There is scarcely a cottage or castle in Belgium in which peasant or noble does not—openly or concealed—treasure a likeness of his adored monarch and of his Queen. In the Catholic schoolrooms, where before the war one

*Citizens of the provinces of Liége and Hainaut.

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would find statues of Christ, pictures of the Holy Virgin, or some likeness of the great Mercier there now stand busts of the King and Queen under the national colors. They hang in the soup-kitchens and day-nurseries with fresh wreaths of flowers around them. They have come into their own. And it is the Teuton invader who has re-crowned them and set them forever in the hearts of their subjects. Whatever the likelihood of the Germans deposing their own ruler, they have only planted more firmly upon his throne the king of their little neighbor.

Such is the irony of fate. Loyalty, patriotism, self-sacrifice, and devotion to a leader is the harvest from the seed sown by the Germans.*

Unquestionably the war will induce greater tolerance between the various political parties. All parties unite in recognizing the grandeur of Cardinal Mercier. To Catholic and Free-thinker alike he has been light in the darkness, the voice not to be stilled in pleading their cause and fearlessly denouncing oppression and cruelty. Brave and Christlike in character, he has stood above parties and strife on the solid foundation of righteousness. To all his suffering countrymen as they have come to know his voice, he has been the good shepherd. And most marvellous of all, he has if possible proved even a greater Belgian than son and prince of the Church of Rome. I scarcely believed my ears when I heard him one day denounce as false Cardinal von Hartmann's public statement that the women of Lille had not been deported by the Germans—an act of villainy which may be proved by the most cursory investigation and known to tens of thousands in the region. Catholics, Liberals, and Socialists, who previous to the war were so bitterly opposed to each other that any social intercourse was impossible and discussion difficult outside the senate or assembly halls, have now for nearly three years been working side by side, daily and intimately; striving to solve the same vital problems, throwing heart and soul into the desperate common task. This experience has created real friendships with an understanding of other points of view such as possibly nothing less than the great tragedy could have effected.

The civic guards will go. Not only was their mobilization and collective use hindered by the rapid development of events during the early days of the war, but many of their valiant stands were the cause of the most dastardly and frightful vengeance upon the entire community. Refusing to fly, disdaining to lay down his arms, many a hero of the *guarde civique* from behind shutters or from the walls of his town shot his last cartridge and emptied his revolver upon the invading German soldiers. Their commanders, infuriated by resistance and refusing to recognize the guards as the soldiers they were, issued orders to burn and raze the entire town as a punishment and a warning against concealed "civilians" shooting upon the advancing troops. Alas, there will be no more gay cockades, resplendent drum-majors, and magnificent uniforms strutting up and down the "grandes places" behind portly burgomasters or stiff-starched flower-girls. The braid and gold lace will go and so will the trombone's discord in the notes of the "Brabançonne."

Political and internal chaos must necessarily follow the close of the war. Party strife will be renewed; disorder will threaten; riots will be imminent. After a tempest the waves must have

*I asked a young Belgian girl what she would rather live to see than anything else, expecting that she might reply: "The return of my lover!" But no; she answered: "I want to sit on top of one of the cupidons crowning the park gates, opposite the Royal Palace. And there I want to have the happiest most blinding cry any girl ever had, when I watch King Albert march through the square at the head of his guides."

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time to subside; farsighted Belgian statesmen already see the necessity of martial law for a longer or shorter time, while the country is busy binding up its wounds. Surely six months of such rule will become necessary.

Among Belgians themselves, what spirit has been developed by years of comradeship? Prior to the war, the Belgian nobleman worried about little beyond the limits of his game preserve; the miner knew little above the roof of the shaft he was making. For nearly three years counts and drillers, proprietors and laborers, have daily been sleeping, eating, and fighting side by side. They have daily risked their lives for one another; they have had one hope, one faith, one goal. They have loved one and the same thing—Belgium. Sometimes it has been the lord of the demesne who has answered "Oui mon capitaine!" as he has taken the peasant's order to charge into hell; sometimes it has been the reverse. But all that has meant one thing. They know each other—all classes—and they know each other's worth. They can never again be strangers. They have all learned to salute their country's flag as the symbol of consecration and self-sacrifice, and they salute it now as they do the little crucifixes over the doors to their barn yards and along their country roads.

A Belgian officer told me once of men who never could be trusted before, jailbirds, similar to many of those enlisted in the French Foreign Legion—that he had seen them again and again go into the most desperate action with a glory in their faces as they looked up at the flags which many of them knew they were looking at for the last time. When every other spark seemed gone, patriotism alone had remained alive in their hearts, and in the end had burned other stains out of their lives.

And within Belgium what are some of the phenomena that have been wrought by the war? Very much the same as in France. The Belgians have found their souls, and you see it shining in their eyes. Frugality in food, in dress, in many other ways, not only has been a necessity but has become a habit, and among all classes. "National service" is the watchword of each day: how much can each one do and in what way can he do it, every day of his life, to help the country? That is the question they ask themselves. Individual interests are too small to consider; individual comforts went by the board long ago, and now they are taken at what they are worth, and despised. How different, I thought, from the point of view of the prospective immigrant I have so often questioned—a point of view we have so long encouraged. The immigrant wishes to come to America because there there will be no more duties to perform, no more military service, nothing to do but just to try and make money. You will owe the country nothing there in America; the country will owe you everything, just as soon as you have crossed the thresholds of Ellis Island. In Belgium you now owe your country everything—body, soul, and all. "*L'état, c'est moi,*" says every Belgian subject, in quite a different sense from "le roi soleil." Nowhere else could the youth of this country better turn their eyes to find the things they need to learn.

If the worth of a man may be measured, as recently emphasized by the great preacher, Jowett, by the sense of his obligations, surely the value of this small nation is very great.

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HOW *the* QUAKERS REGARD MILITARY SERVICE

By ALLEN C. THOMAS

(*Emeritus Professor of History, Haverford College*)

THE Quakers from the very first have laid great stress upon individual guidance and individual responsibility, and have seldom formulated rules or made official statements regarding details of doctrine. This fact has often led to misconceptions of their position. Within rather wide limits, there are great differences in individual opinion and action. It does not do, therefore, to take the views of individual Quakers or even of Quaker congregations as necessarily representing the views of the majority, or as having official sanction. This is particularly true in regard to Peace and War. The writer in this paper will endeavor to set forth only such views as seem undoubtedly to represent generally accepted doctrines.

The Quaker looks at war, not from the point of view of economics, or politics, or expediency, but from a *religious basis* and he believes that *all* war is incompatible not only with the definite teachings of Christ,[1] but also with the whole spirit and tenor of the Gospel, which lays down, as its guiding principle, love to God and love to man; or, to put it differently, the Quaker believes in justice and good-will to all, whether individuals, groups, or nations.

Moreover, the Quakers do not recognize two standards of conduct—one for individuals and another for nations. If to lie, deceive, rob, lay waste, kill, is wrong for the individual, they do not see how it can be right for men to do these things singly or in groups in the name and for the sake of the nation. A duel, for instance, is prohibited and punished by law, and most persons regard the taking of life in a duel as murder. War is substantially a duel between nations. The Quaker cannot draw any moral distinction between the two.

It follows from what has been said, that, to the Quaker, *defensive* war does not differ in essentials from offensive war. He cannot, therefore, consistently vote for taking military measures for warlike defense and the like.[2]

Again, it will be evident that the Quaker cannot take part in *personal* military *service* even in defensive war. The Quakers, on the other hand, have never denied the obligation of personal service to their country, but they hold that such obligation does not include *military* service as a necessary part. The Quakers are content to refer to their past history to show to what extent they have performed service for the community and nation. In one field, that of relief connected with

[1] Three or four sayings of Christ, which are generally quoted quite apart from their context, cannot outweigh many others, such as the Sermon on the Mount, about which there can be no question, to say nothing of the general tenor of Christ's teachings.

[2] Quakers, however, have very rarely refused to pay ordinary taxes even though some of the money might be used for warlike purposes, because they have not felt it to be their duty to attempt to follow the course of money paid into a common treasury.

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the ravages of war, their record in our Civil War, in the Franco-Prussian War of 1870-1871, and in the present great war, shows how ready they have been to take part in relief and hospital work of many kinds and under conditions of great personal danger. This work, moreover, has been almost wholly without compensation except as to necessary personal expenses.

The Quakers hold that *compulsory* military service violates the rights of individual conscience, for it places a man under a military officer whom the soldier is bound to obey *whatever* he may be ordered to do. *Compulsory* military *training* is in the same category as military service. The youth is not only trained for war in general, but he is specially trained to *kill*. For instance, in his bayonet practice he is taught exactly where to strike in order to inflict mortal wounds. Moreover, he is placed in surroundings which turn his mind toward war as the chief and best way of settling national difficulties. The inevitable tendency is to make him regard other nations as, at least, probable *enemies*, and also to lead him to believe that to fight is fulfilling the noblest ideal. All this is wholly contrary to the Quakers' fundamental position.

The Quakers believe that *Police service* is essentially different from military service. The soldier, though he may be occasionally employed for protection, is trained for *war* and its accompaniments. The sole duty of the policeman, on the other hand, is to protect lives and property, and to see that individual rights are not infringed upon—in short, the very opposite of the soldier. The policeman can only take life as a last resort, and then he does it at his own risk. In some cities he is not even allowed to have firearms. Moreover, the policeman is always a *volunteer*, he is not compelled to enter the service unless he chooses.[1]

The fact that force may be used in police service, or under some circumstance, does not invalidate the general position. The Quakers have never officially, or generally, taken the Tolstoyan ground, though doubtless some individual Quakers have followed the Russian teacher. "Force may be used to restrain a man from committing crime, to protect society, to discipline a child," but the Quaker "would stop the use of force where its use would in itself be wrong, where resistance would violate the moral law, where its opposition would stir up feelings of hatred and bitterness." To draw an exact line between the right and wrong use of force is confessedly difficult if not impossible. In practice individuals would often differ greatly; but Quakers undoubtedly hold that the methods of *warfare* are wrong.

The Quaker claims that to pay no regard to the rights of the individual conscience is, independently of other reasons, contrary to the spirit of America's institutions and history. New England, New Jersey, Pennsylvania, and Maryland were settled by colonists who left their homes to secure in the New World liberty of conscience in matters of worship and conduct.

It may be necessary sometimes to limit the exercise of the individual conscience, but it should be done with great caution as has generally been the case heretofore in America.[2] Washington's words in his Farewell Address are often quoted in support of "preparedness" and military service; it is certainly fair to quote other words of

[1] The history of the Pennsylvania State Constabulary shows how much more successful they have been in ending riots, etc., than militia or troops have been.

[2] The prohibition of religious teaching in schools supported by public taxation is one example of paying regard to conscientious scruples, and the separation of church and state another.

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his. In October, 1789, the Quakers of Pennsylvania and New Jersey presented to him an address congratulating him on his accession to the Presidency. In his reply, Washington said: "Your principles and conduct are well known to me; and it is doing the people called Quakers no more than justice to say that (except their declining to share with others the burden of the common defense) there is no denomination among us who are more exemplary and useful citizens. I assure you very explicitly that, in my opinion, the conscientious scruples of all men should be treated with great delicacy and tenderness, and it is my wish and desire that the laws may always be as extensively accommodated to them as a due regard to the protection and essential interests of the nation may justify and permit.[1]

The question will naturally be asked, Have the Quakers in their corporate capacity lived up to the principles they have professed? The answer, as shown by their official records and other evidence, hostile as well as friendly, must be in the affirmative, though individuals may have been negligent, and sometimes even defiant.

It is true that Quaker members of the Pennsylvania Legislature, particularly about the middle of the eighteenth century, did vote supplies which they knew could and probably would be used for warlike measures, but this was an individual matter, was not officially endorsed, and later was repudiated by the Philadelphia Yearly Meeting, the legislative body of the Quakers, and, so to speak, their Supreme Court. Later, the Quaker members of the Legislature, with few exceptions, either resigned their seats or refused to be candidates. In fact, the Quakers at that time withdrew from politics chiefly on account of the difficulty of voting in accord with their principles.[2]

In the American Revolution hundreds of Quakers were "disowned" (expelled) for joining the army or in other ways supporting military measures; in the Civil War also many were "disowned." During the present great war British Quakers have repeated previous history. Strong documents restating the original and continuous position of the Quakers in regard to war have been officially issued, and at no time in Quaker history have individuals lived out their principles more emphatically, in a number of cases even to the extremes of much personal indignity, and imprisonment at hard labor; several have been condemned to death by courts-martial, but this has been commuted by British Government to imprisonment at hard labor.[3] It is too soon for official action to be taken against those who have entered the military service, for it is a principle with the Quakers not to be hasty in judgment.

Quakers have been often misunderstood by reason of their custom of having birthright membership.[4] The result of this system has been that many who never made any Christian profession, or shown their adherence to Quaker tenets, have been counted as Quakers and spoken of as forsaking their principles, when in fact they had nothing but a traditional connection with the body, perhaps never even attending a Quaker place of worship.

[1] Sparks, "Writings of Washington," vol. xii, p. 168, 169.

[2] See Sharpless, "A Quaker Experiment in Government," Philadelphia, 1898, pp. 226-276.

[3] Up to January 1, 1917, 3,249 persons, the majority being Quakers, had been arrested, since August, 1914, for refusing military service on the ground of conscientious scruples. Of these 160 had been released, 1,172 were employed on alternate service, and the remainder were undergoing some kind of punishment, the sentence of few being less than 112 days' imprisonment at hard labor, and of some, ten years.

[4] Since 1902 most of the Yearly Meetings in America have substituted "associate membership" for children of members. These can be admitted to full membership in maturer years on giving evidence of the sincerity of their application.

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There is reason to believe that most of the Quakers (so-called) who entered the army in 1861-1865 were only nominal Quakers, and it is certain that many of the English Quakers who have joined the British army in the present war are of this class also.

That the Quaker has suffered greatly for his principles is a matter of historic fact, the details of which are too numerous to be entered upon here.[1] A typical case of the Civil War period was given in the *Atlantic Monthly* for February, 1913 (volume CXI, pp. 142-166), entitled "United States *versus* Pringle."

The Quaker is not governed by results but by principles. If he is satisfied a thing is wrong, he must not do it; and if his refusal brings him into opposition to the law, he takes the consequences. He does not admit that the State may control his conscience, or that any demand or order of the State can release him from his responsibility to God. It may be claimed that such a position would lead to anarchy, but in practice it would not, because if a man is faithful to the fundamental principles of love and justice, he will not go seriously astray. Moreover, as history will show, the cases in which it seemed necessary for a truly conscientious man to refuse obedience to laws have been few, and there is no reason to suppose that either at present or in the future conditions would differ essentially from those in the past.

In conclusion it should be said, that while the Quaker holds his own views tenaciously as a matter of conscience, he is not intolerant of those who differ from him. He recognizes that others may be fully as conscientious as he, and he respects their conscientiousness, and their faithfulness to apprehend duty. "He has honor and respect for their motives however much he may dissent from their philosophy of life and their methods of carrying it into action."

[1] See Besse's "Sufferings of the Quakers," 2 vols. fol. London, 1753, for the seventeenth and early years of the eighteenth centuries; Bishop's "New England Judged," London, 1703, for the New England persecutions; R. M. Jones', "The Quakers in the American Colonies," London and New York, 1911, for the whole Colonial period; and Cartland's, "Quaker Heroes," Boston, 1895, for the Confederacy. No full account of the nineteenth century has appeared, but brief mention will be found in A. C. Thomas's, "History of the Friends in America," 4th ed., Philadelphia, 1905.

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BOY SCOUTS IN THE WAR

By JAMES E. WEST
(*Chief Scout Executive*)

AS A result of inquiries received at headquarters from thousands of parents and from scoutmasters and scout officials all over the country, a statement was issued in the February 15th edition of *Scouting* under the head, "What Boy Scouts Will Do In Case of War." In this statement the Executive Committee of the Boy Scouts of America endeavored to clearly set forth the settled policy of the movement which has on numerous occasions been concurred in by councils, troop committees, and scout officials throughout the United States. At a meeting of the National Council March 15th this expression of policy was endorsed and reaffirmed.

The statement was favorably received by most of the newspapers and by practically all parents. The only misunderstandings which have arisen concerning it, resulted from an incorrect idea of what is meant by military training. It was said in the statement that as an organization the Boy Scouts of America would take no definite part in any military operations, but the services of the scouts would be available to civic authorities for non-military work. Services of this character will include:

1. Distributing notices and gathering statistical information for the use of civic and military authorities.

2. Coöperating in the protection of property by accepting definite assignments for the purpose of giving alarm in case of danger.

3. Collecting information regarding supplies.

4. Acting as messengers.

5. Coöperating with agencies organized for relief efforts.

6. Assuming some definite part in the program of the American Red Cross Society.

Those who understand military training to include every form of knowledge made use of by an army did not understand how boys could do the things suggested and still take no definite part in military operations. A modern army, however, makes use of almost every form of knowledge and training which men possess and were boys to do nothing which members of the military organization do, it would curtail their activities to such an extent that giving them useful training of any sort would be an absolute impossibility. A regiment of artillery includes a chaplain, two veterinarians, twenty-two musicians, fifty-two mechanics, and nineteen cooks. None of these men are chosen because of their ability as fighters, and the regiment must also make use of many other men who possess special training—training which is as important in time of peace as in time of war. A doctor may be absolutely ignorant of small arms, machine guns, artillery, hand grenades, or any other of the destructive implements of modern warfare and still be of tremendous service to an army. Yet no one argues that Medical Schools are training men for the army, and ability as a veterinarian, musician, mechanic, or cook is not considered military ability. When the statement is made by scout officials that scouts will take

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no distinctive or definite part in any military operation, it is meant that scouts will take no part in any activity the intent of which is to take life and that they will receive no training the intent of which is to prepare them to take life. Those interested in the movement are satisfied that such activities and such training are unsuitable for boys of scout age.

But if war comes, the boys of the country will not escape its influence. Letters have been received at Scout Headquarters and editorials have appeared in some papers which indicate that a certain number of grown-ups believe that the normal life of the boy will be in no way disturbed. Boys will beyond question attend schools, run errands, split wood, and in fact continue all their usual activities, but they will not do them as they do in time of peace. The war cloud will give new lights and shadows and color every single thing which they undertake. There is no way to prevent this abnormal excitement, and the emotions aroused are certain to find expression. If the boys at this time are not carefully directed to constructive work, and it must be work which satisfies their desire to be a part of what is going on, they will themselves find an outlet for their pent-up emotions, an outlet which is very apt to be an unfortunate one. The frightful increase in juvenile delinquency which took place in England and other European countries after war was declared demonstrated absolutely that the unusual mental state created in boys during a great National crisis cannot be ignored. They must be allowed to feel that they are taking some real part in the great drama which is going on about them.

In every scout centre where there is a local council or a scout organization of any kind, committees are being formed who will tender through the proper authority the services of the Boy Scouts of America for non-military duties.

With the view of further preparation for possible emergencies many communities where there are two or more troops are perfecting plans for the quick mobilization of the scouts.

It is believed that the Boy Scout Movement will prove adequate for any emergency likely to arise. Everywhere it is expected that the boys will do their duty to God and their country and obey the scout law.

They will help other people at all times.

They will keep themselves physically strong, mentally awake, and morally straight.

They will do their good turn daily.

Every scout will be trustworthy, loyal, helpful, friendly, courteous, kind, obedient, thrifty, brave, clean, and reverent. Every boy who becomes a scout pledges himself to do these things.

Because of their special training scouts are prepared to do a number of things which may be of great benefit to their communities.

Every scout who wears a Second Class or First Class badge is prepared to render first aid to the sick or injured and to act as assistant in a hospital.

Every scout who ranks above a Tenderfoot can send and receive messages by semaphore or by Morse code. If telegraph and telephone lines are out of commission, scouts can be used to maintain communications between any points within signalling distance. Many troops have serviceable wireless outfits.

Scouts are trained to observe and remember. They know the public buildings; the locations of fire alarm boxes, hospitals, police stations. They could assist the police and firemen.

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Scouts' pace enables them to cover distance quickly on foot when there are no conveyances. With knife, hatchet, and cooking kits they would help to shelter and feed persons temporarily homeless.

First Class Scouts can swim. That would insure the stretching of the first strand of a needed bridge or the rescue of persons in danger of drowning.

Long hikes, with careful observations, written reports, and map making have prepared them to gather important information.

Practical nature study has taught them the uses of the trees, plants, and vegetables. Their training of other boys in the tenderfoot requirements has made them teachers—they would multiply the results of their own efficiency by imparting it to others.

An important duty will devolve upon those scout officials who remain at home. Under no circumstances should any troop be allowed to disband or be without adult leadership because a scoutmaster or assistant scoutmaster has patriotically responded in the present emergency. The Troop Committee, or the Patrol leaders in case the Troop Committee is inactive, should see to it that a canvass is made, first through the institution with which the troop is connected and then through the parents of the members of the troop, until some one is found who will assume the leadership of the troop and guide the boys in their service to their community, service which will not only benefit the country but will also protect and develop the boys.

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THE SERVICE RIFLE*

By CAPTAIN RALPH M. PARKER
(2d U. S. Cavalry)

TRIGGER-SQUEEZE EXERCISE

The instructor commands: 1. Trigger squeeze. 2. Exercise.

At the command Exercise, the soldier will execute the first motion of the aiming exercise.

(Two) The second motion of the aiming exercise.

(Three) Draw a moderately long breath, let a portion of it escape, hold the breath and slowly raise the rifle with the left hand until the line of sight is on the mark, being careful not to incline the sights to either side. Contract the trigger finger gradually, slowly and steadily increasing the pressure on the trigger, while the aim is being perfected; continue the gradual increase of pressure required to release the point of the sear, which can be given almost insensibly and without causing any deflection of the rifle. Continue the aim a moment after the release of the firing pin, observe if any change has been made in the direction of the line of sight, and then resume the position of "Ready," cocking the piece by raising and lowering the bolt handle.

Remarks.—Poor shooting is often the result of lack of proper coördination of holding the breath, the maximum steadiness of aim, and the squeeze of the trigger. By frequent practice in this exercise each man may come to know the exact instant his firing pin will be released. He must be taught to hold the breath, bring the sights to bear upon the mark, and squeeze the trigger all at the same time.

The Trigger Squeeze.—The trigger should be squeezed, not pulled, the hand being closed upon itself as a sponge is squeezed, the forefinger sharing in this movement. The forefinger should be placed as far around the trigger as to press it with the second joint. By practice the soldier becomes familiar with the trigger squeeze of his rifle, and knowing this, he is able to judge at any time, within limits, what additional pressure is required for its discharge. By constant repetition of this exercise he should be able finally to squeeze the trigger to a certain point beyond which the slightest movement will release the sear. Having squeezed the trigger to this point, the aim is corrected and, when true, the additional pressure is applied and the discharge follows.

RAPID-FIRE EXERCISE

Object.—The object of this exercise is to teach the soldier to aim quickly and at the same time accurately, in all the positions he will be called upon to assume in range practice.

The instructor commands: 1. Rapid-fire exercise. 2. Commence firing. At the first command the first and second motions of the trigger-squeeze exercise are performed. At the second command the soldier performs the third motion of the trigger-squeeze exercise, squeezing the trigger without disturbing the aim or the position of the piece, but at the same time without undue deliberation. He then, without removing the rifle from the

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shoulder, holding the piece in position with the left hand, grasps the handle of the bolt with the right hand, rapidly draws back the bolt, closes the chamber, aims, and again squeezes the trigger. This movement is repeated until the trigger has been squeezed five times, when, without command, the piece is brought back to the position of "Ready."

When the soldier has acquired some facility in this exercise, he will be required to repeat the movement ten times, and finally by using dummy cartridges he may, by degrees, gain the necessary quickness and dexterity for the execution of the rapid fire required in range firing.

Methods.—The methods of taking position of aiming, and of squeezing the trigger, taught in the preceding exercise, should be carried out in the rapid-fire exercise, with due attention to all details taught therein; the details being carried out as prescribed except that greater promptness is necessary. In order that any tendency on the part of the recruit to slight the movements of aiming and of trigger squeeze shall be avoided, the rapid-fire exercise will not be taught until the recruit is thoroughly drilled and familiar with the preceding exercise. The recruit will be instructed that with practice in this class of fire the trigger can be squeezed promptly without deranging the piece.

Repetition.—If the recruit seems to execute the exercise hurriedly or carelessly, the instructor will require him to repeat it at a slower rate.

Manipulation of the Breech Mechanism.—To hold the piece to the shoulder and, at the same time, manipulate the breech mechanism with the proper facility are learned only after much practice. Some riflemen, especially men who shoot from the left shoulder, find it easier, in rapid firing, to drop the piece to the position of load after each shot. While at the first trial this method may seem easier, it is believed that, with practice, the advantage of the former method will be apparent.

GENERAL REMARKS ON THE PRECEDING DRILLS

The importance of sighting and position and aiming drills cannot be too persistently impressed upon the soldier. If these exercises are carefully practised the soldier, before firing a shot at a target, will have learned to correctly aim his piece, to hold his rifle steadily, to squeeze the trigger properly to assume that position best adapted to the particular conformation of his body, and will have acquired the quickness in manual dexterity required for handling the piece in rapid fire. This knowledge cannot be successfully acquired upon the target ground. At that place the time that can be given to instruction is limited and should be devoted to the higher branches of the subject. Even if the desired amount of attention could be given to each soldier, nevertheless, from the circumstances of the firing, his errors can be readily determined. It is more than likely that the soldier would never discover the reasons for his failures and would, therefore, be unable to properly correct them.

Under such conditions the knowledge that he may have of the many other requisites for good marksmanship cannot be utilized to full advantage, and, in fact, can but in a limited degree compensate for the neglect of these first principles and for the failure to lay, by assiduously practising them, the only firm foundation for future proficiency.

If, in the instruction practice on the range, it is found that the soldier makes errors in his position, he should be required to stop firing and to prac-

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tise the third exercise for 10 or 15 minutes. He should be encouraged to go through these exercises frequently at other than drill hours, care being taken that, in the aiming and trigger-squeeze exercises, he always has some definite object for a mark.

DEFLECTION AND ELEVATION CORRECTION DRILLS

Sight Correction.—The soldier may find when firing at a target that the first shot has missed the bull's-eye or figure, and in order to cause the second to hit, two methods may be used: The point of aim may be changed or the sights may be moved and the same point be aimed at. In order to do accurate shooting it is essential to have a well-defined mark at which to aim; consequently, except for very slight corrections, the method of moving the sights, involving changes in elevation and windage, is devised.

Elevation.—The instructor will show the men the graduations at the rear-sight leaf, and will explain to them the value of the different divisions. He will explain how to adjust their sights for different distances. He will make it clear that raising or lowering the slide on the rear-sight leaf has the effect of raising or lowering the point struck. The amount of change which a given amount of elevation will cause in the point struck varies with the range and with the rifle and the ammunition used.

Deflection.—The instructor will explain how to move the movable base by use of the windage screw; that the graduations on the rear end of the movable base are for convenience in setting the sights and applying corrections; that each division is called a point of windage; that turning the movable base of the rear sight to the right or left changes the point struck to the right or left; that, to overcome the drifting effect of a wind from the right, the movable base must be moved to the right, and if the wind be from the left, the movable sight base must be moved to the left.

Adjusting the Sights.—Elevation.—The graduations on the rear sight will be found correct for but few rifles. This is due to slight variations in the parts of the rifle, especially the barrel, which occur under the most exact methods of fabrications. Not all rifles are tested at the arsenal, and when the graduations for the rear sight have been experimentally determined, they are correct only for the particular conditions existing when they were so determined. The correction necessary for each particular rifle at any range is found by shooting it at that range, and is constant with the same ammunition and when firing under the same conditions. If no correction is necessary, the rifle is said to "shoot on the mark."

Exercise.—To give the soldier practice in correcting elevation and windage, a target should be placed on the wall facing the squad and a blank paster attached a foot or more from the bull's-eye, at first directly above or below the bull's-eye, then on a horizontal line with it, and finally in an oblique direction.

For this drill the rifle of each soldier who has not determined by actual firing the "zero" and the correct elevations for the different ranges will be assumed to shoot on the mark and to require no windage.

Announce the range and tell the men that the paster represents the position of an assumed hit and require each man to correct his sight so as to bring the next hit into the bull's-eye. This exercise should be repeated daily during gallery practice, using the A, B, C, and D targets, until the men have acquired accuracy in making corrections for all ranges up to 1,000 yards.

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When the men have learned how to adjust their sights, this exercise should be carried on in connection with gallery practice. The rear sight on each rifle is given an incorrect setting in elevation and windage by the instructor, and the soldier required to find the correct adjustment by firing.

DEFINITIONS

Danger Space: That portion of the terrain which is rendered dangerous by a cone of fire striking it or passing so close to it that men within it are in danger of being hit.

Cone of Fire: A group of trajectories from a group of rifles fired at a common target, with a uniform rear-sight elevation.

Note.—When the cone is concentrated, greater accuracy in estimating of range is necessary. With accurate estimation, however, fire superiority is more quickly gained. When the cone is unduly dispersed the danger space is increased but objects within it are in less danger of being hit. The cone should have little depth and should cover the entire extent of the target. In order to more quickly reach a target to which the range is not known the use of combined sights is employed. (The platoons taking different sight elevations.) When a well-trained unit is firing it should be well handled or poor results will follow, due to poor control and direction.

Trajectory: The path which a bullet or projectile follows in its flight.

Fire Discipline: The quality possessed by a well-trained fire unit which enables it to respond to the will of its commander under all circumstances.

Fire Control: The actual control exercised by the commander of a fire unit in causing it to commence, cease, and change the direction of its cone of fire at his will. This pertains more particularly to the platoon commanders.

Fire Direction: The direction for the employment of fire, consisting of the assignment of sectors, targets, objectives, and the arrangement for fire upon dead spaces in adjacent sectors, etc.

Regular Season: A period of two months annually set aside by department commanders for the conduct of target practice.

Supplementary Season: A period of the year midway between regular seasons for conducting rifle practice for those who have joined since the regular season or who were not able to participate therein. It is for the purpose of preventing an accumulation of men in companies who have had no rifle practice.

DUTIES OF COMPANY COMMANDER IN CONNECTION WITH TARGET PRACTICE

The commander is directly responsible for the efficiency of his men in rifle practice—he is the chief instructor for his company.

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